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Influence of Co-operative Marketing on Prices to Members

by Theodore Macklin
University of Wisconsin

THE AMERICAN public has scarcely seen a time when farmers were in greater need of profits than today. To make a profit is the incentive that has inspired vast numbers of farmers to join co-operative organizations. Their joining is a measure of their faith in the ideas popularly associated with the word "co-operation." That this faith has been pinned to a vague term used loosely by large numbers of people is the very reason why it is timely now for the word to be made to stand for something definite and dependable. There is no better means of telling what the benefits of co-operative marketing are than to summarize the eight chief claims of successful co-operative organizations themselves.

The Eight Benefits of Co-operative Marketing

The eight main benefits of co-operative marketing as proved by co-operative organizations consist of three tangible and five intangible benefits. The three tangible or financial benefits taken together enable farmers to secure the highest prices possible, provided the organization is the most capable and efficient in the business field concerned. The five intangible benefits enable farmers to become better all-round business managers of their affairs, as it were, masters of their occupation, instead of slaves to it. Briefly stated in outline, these rewards for successful co-operative marketing are:

Tangible Benefits (Financial Gains)

—1. Co-operation gives co-operating farmers the net profits of marketing, if net profits are made by the co-operative company. Net profits are rarely more than a small part of the so-called gross profits, which consist of all middlemen expenses and their net profits.

The net profit is the least important reason for co-operating. It amounted, in one of the best known co-operative examples, to one cent for each dollar's worth of produce sold.

2. Co-operative marketing, efficiently conducted, reduces the cost of marketing so far as this can be done. This is many times more important as a reason for co-operating than is the middleman's net profit. The lowering of marketing cost is, perhaps, four times as important as trying to take over the middleman's net profit. By competition, this benefit is spread over, in other words, paid, to all farmers in the competing territory. Co-operative companies have not obtained this benefit quickly. It has been slow work.

3. Co-operation improves old and creates new marketing services for its members. This is one of the most important financial reasons for co-operating. One noted co-operative company, for instance, after more than 15 years of experience, has built up a system that gives its members the kind of service needed. This improved marketing service through co-operation during 1922 was 16 times as

important as middleman profit and four times as important as the work of cutting down sales costs through co-operation. No short-lived co-operative companies have brought about this great benefit.

Intangible Benefits (Non-Financial Gains)—4. Co-operation readjusts standards of production. It helps the farmers understand what products pay best. It takes time for this benefit to arrive, but it is of tremendous importance. No short-lived co-operative companies can bring about this result. Most of the old companies have given benefits of this kind.

5. Co-operation gives farmers confidence in the marketing system that they patronize because they own it and control its policies. This confidence grows stronger and stronger as farmers work together long enough and patiently enough, first, to understand each other; second, to recognize their mutual problem, and, third, to see how their co-operative system and policies actually better conditions.

6. Co-operation convinces farmers that their products are marketed as well as they can be, and therefore that their prices are as high as they can obtain. This is a great benefit. It has come to the members of the oldest co-operative systems, such as the Danes, Southern Californians, Eastern Shore Virginians, Tillamook, Oregon, cranberry producers, and others. It is a benefit that will come to any experienced group of co-operators.

7. Co-operation stimulates the development of leadership. It does this through the incentive and co-operative responsibility that stimulates farmers to develop from within their midst capable leadership around which agriculture may rally and advance to higher attainments in marketing, production, and business management that makes profits more certain.

8. Co-operation, and the experience it gives those who practice it, has taught co-operators the commercial point of view. It has made them know that success in agriculture depends upon having, first, the marketing done efficiently; second, the farming conducted in a manner to be profitable, and, third, living made worthwhile.

Money making through the best marketing and farming are only stepping stones to the better things in life that people crave. This balanced point of view of agriculture is the great ultimate benefit that comes from successful co-operation.

Co-operative Work and Highest Prices

Extensive investigations of marketing costs, prices and the profit margins of operating companies have provided accurate facts regarding the several sources of financial gain through co-operation. These sources have already been named under the heading "Tangible Benefits." Each of the four principal classes of co-operative organization forms are able to

secure tangible benefits from these sources in varying degrees. Accordingly it is desirable to note briefly what has been accomplished by organizations of local, federated, centralized and combination characteristics.

Influence of Locals on Farmers' Prices

One of the most authoritative investigations of local co-operatives in relation to private enterprises of the same kind brought forth the facts regarding butter prices received by farmers. It indicated that the members of co-operative creameries received prices that averaged three cents per pound more than the patrons of private local creameries. (For exact details, see Wisconsin Experiment Station Bulletin 270, Table XVI, p. 63.) This was when the private creamery operators paid an average price of 30 cents a pound. Hence, the three-cent premium price which local co-operatives earned for their members was 10 per cent above the private price level. The significant fact to be remembered about this, moreover, is that the 10 per cent advantage in local price to co-operators was a permanent or sustained advantage.

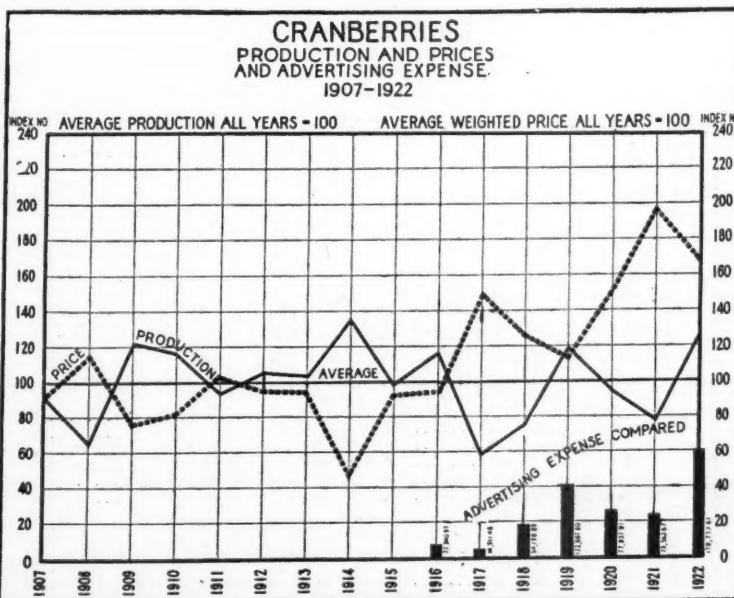
Another example of the influence of co-operation in giving members better prices than patrons of private business received are the facts about Kansas co-operative local elevators. Of 77 elevators which reported savings that were pro-rated on the bushel basis after paying six per cent on capital, more than 88 per cent of them paid patronage dividends of from four to 12 per cent above the private dealer price level. These co-operatives, as local enterprises, thus averaged for their members fully seven per cent higher prices than the private competing elevators. (For exact details see Kansas Experiment Station Bulletin 224, second table on p. 52.)

Many illustrations of the financial or tangible benefits of local co-operation could be cited, but space forbids. These gains come from the ordinary profits of operating a successful company, from additional savings made by enlarging the business through consolidation or strength in competition and from a very decidedly improved character of service rendered. These same kinds of money-making also enable the three other classes of co-operative organizations to reward their respective members.

Distinguish Locals from Large Scale Co-operation

The distinction between locals and the three forms of large scale co-operative enterprise is largely in the scope of work done. Locals render specialized service in only part of the whole work of marketing. The large scale co-operatives of federated, centralized or combination forms perform other services, especially those of selling, risk spreading, distributing and storing, which, if adequately done,

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The effect of advertising on the prices at which all of the American Cranberry Exchange's crops have been sold. In 1922 one of the largest crops of cranberries competed with the largest and most universal crop of all varieties of fruit that has been produced, yet the price line remained 65 per cent above the average.

Government Inspection and the Fruit Industry

by Wells A. Sherman

Bureau of Agricultural Economics

IT IS doubtful whether, up to six months ago, half the fruit growers in the United States had even heard of Government inspection. Certain it is that less than half of them had ever used it. Yet there were many even then to whom this service had become an indispensable aid in marketing. Within the last few months their number has grown so rapidly that the resources of the fruit and vegetable division of the Bureau of Agricultural Economics have been taxed to the utmost to meet their demands for service.

This work is still in its infancy, as to years, but since it is already indispensable to so many growers, perhaps the rest should give it more than a passing thought before assuming that it has no place in their marketing scheme.

Something Worth Paying For

This time the Government has something to sell to the farmer for a cash charge. He may buy it or let it alone, but it is no free gift.

Congress has put the Department of Agriculture into business and has said, "Now let us see if you can make it pay." But Congress has given some definite instructions and has set certain limits within which we must operate. In effect, it has said, "Here is a lump sum of \$160,000 to be spent during the next fiscal year in the inspection of fruits and vegetables in terminal markets and at shipping points. You may render this service to any financially interested party. You are to charge fees which shall be reasonable and as nearly as may be to cover the cost of the service, but these fees must go into the Federal Treasury, and you may not re-expend them. The certificates which you issue in doing this work shall be received as prima facie evidence in all Federal courts." Such are the orders and the limitations under which the Department works.

The second year's work under this authority was completed June 30, 1924. For the five preceding years, the Department had been limited to making inspections in the larger terminal markets. With a slowly increasing appropriation, it had built up a force of some 50 splendidly trained men. The fees, at only \$4 per carload inspected, returned to the Treasury five-sevenths of the appropriation.

The work at shipping points, during its first season, returned to the Treasury a little more than it cost. But the Department could spend its fixed appropriation and no more. The profits could not be used to expand the business. Demands for any further service must go unmet.

As an example of the Government in business, this service is unique. How did it happen and what does it do?

Almost every fruit grower who is obliged to use wholesale channels of distribution has had unfortunate experiences at the city end. Too often reports have come back that his goods had arrived overripe, frozen, decayed, with broken packages or otherwise in bad condition. Perhaps even more frequently the receiver has reported that the fruit was of inferior quality or below the grade demanded by the market or specified in his order.

Helpless in dealing at long range with the receiver, the shipper has often turned for redress to the carrier, only to find himself poorly equipped to press his loss-and-damage claim successfully. These were the conditions which stimulated the original demand for a disinterested, official determination of the facts concerning shipments which were "in trouble" in the markets from any cause.

The original thought of Congress was that shippers alone would use these Federal inspectors, but not so. Set up an agency in any industry which is competent, fair, courteous and immovable in its determination of disputed facts and it is reassuring to see how many people from every element of the industry patronize it.

Shippers and shippers' agents used this service from the start, as was expected. The honest receiver began to use it also, to prove to the grower that the stock was sometimes received in bad order. The shipper found this certificate the best backing for his railroad claim that he had ever had. The railroads not only treated the certificate seriously in settling claims, but saw that it would work both ways, and themselves became liberal users of the service. Why? Be it known then that the claim departments of some large ship-

ping concerns are exceedingly well organized. It is rumored that more than one big speculative deal which was "in the red" at the end of the marketing season was saved by the claims subsequently recovered from the carriers. In some quarters, the development and prosecution of claims is such a fine art that some of the carriers buy Federal inspection as an insurance.

Service Leads to More Service

For several years there has been a strong drift away from consignments

ago immense quantities of fruit, especially boxed apples, were being sold f. o. b. to buyers across the continent on the basis of fairly definite grades.

Too often inspection in the markets showed that deliveries were not up to grade. Some shippers thought our inspectors were partial to receivers. When the shipper could be induced to come to the market he could be shown that the inspection was accurate and the certificate impartial. He could see, too, that the Federal inspector applied grade rules more carefully than did the organization back

home, and he reached a natural conclusion. Said he, "We ought to have this certificate issued at point of origin; then when we made an f. o. b. sale it would stick. I would have a better basis for a railroad claim than I have now. If my original certificate showed No. 1 stuff, properly loaded, and a certificate at the market on the same car showed unreasonable deterioration, my claim would be air tight and puncture-proof."

So the apple shippers of Washington, through their representatives in Congress, injected into our appropriation item for this work the few words necessary to authorize the Department to inspect at shipping point as well as at market. This change was in the appropriation bill for the fiscal year ending June 30, 1923. The extended authority became effective July 1, 1922.

This change in language was made on the floor of the House after the bill had been reported from the committee. The amount carried for the inspection item had been estimated with only the terminal service in mind. In five minutes Congress expanded our field to cover a nationwide industry, but neglected the detail of providing any additional money. Authorized to multiply our service by 10 or 20 or 100, but without a larger fund to draw upon, with the fruit men clamoring for service and being told by their congressmen that the service had been authorized, what were we to do?

Bricks Without Straw

When the Israelites, the cowboys and sheep herders of the ancient world moved into the intensive agricultural and industrial life of Egypt, they became hardy and efficient workmen. As a reward for their efficiency their rulers gave them the privilege of finding for themselves an essential part of the raw material of their craft. Straw was denied, but the tale of bricks was not diminished. According to modern industrial ethics, there should have been a strike, but no, they sought the dry fields and gathered stubble.

Perhaps we ought to have struck—modern fashion—when asked to inspect an immense but undetermined volume of fruits and vegetables, thousands of miles from our existing inspection centers, without the usual raw material, an appropriation. But men who hold the privilege of serving the public "during good behavior" have never struck. We went afield to look for stubble.

Several states had small forces of salaried agricultural workers which could be utilized. Some had remnants of appropriations which they could use for standardization or inspection work. Some had legal authority lying dormant in their agricultural departments to operate revolving funds derived from services rendered.

Every state was approached with the broad proposal that its resources be utilized under our authority to render the industry a new and valuable service. Thus the country was canvassed and co-operative agreements for shipping point inspection were made with 24 of them the first year. The writer personally negotiated 22 such contracts before he wrote the first one, which was a duplicate of any other. Each fitted the peculiar local situation, complied with local laws and also came within the broad authority of the Federal law. The work actually done was the same everywhere.

Thus was the stubble gathered, a little here and a little there, of many kinds and lengths and qualities. But the bricks were made and the close of the first year, June 30, 1923, saw a grand total of 72,644 carloads of fruit and vegetables inspected, on request, at shipping points. That was nearly three times as many as had ever been inspected in terminal markets in one year. In a single season, the service had become one of the

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Federal inspector at work

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Selling California's Orange Crop

by Dana C. King
California Fruit Growers' Exchange

IN CONSIDERING the marketing of California's orange crop, it must be remembered that 85 per cent of the 15,000 California orange growers are members of 250 local co-operative associations, and that 85 per cent of these associations are affiliated with the California Fruit Growers' Exchange. There is less than 15 per cent of the California orange crop marketed on a speculative basis. The California citrus growers were pioneers in the establishment of their business on a merchandising basis and eliminating the speculative features which are so prominent in the marketing of most perishable commodities. Thirty years ago, the California citrus crop was largely marketed by speculative operators, and with only a few hundred cars of fruit, the business was in a chaotic condition. The co-operative movement was started at that time, and has grown steadily, and has successfully handled constantly increasing crops, and has placed the business where it stands today—on a merchandising basis, California oranges being obtainable 52 weeks in the year in every store and shop in the United States, Canada and many foreign countries, instead of being a luxury that could previously be secured only irregularly in large cities.

Accurate Estimates Is First Step

The first step in selling anything is to know how much of it you possess, and for this reason a very important step in our business is the making of comprehensive crop estimates. These estimates are begun long before the fruit attains maturity, and are continued each month throughout the year, making the adjustments that are evident from time to time. These estimates are made by the growers in the first instance, based on previous production and their judgment as to the present crop. They are checked and revised from time to time by the managers of the local association, and the composite figures of all associations are compiled as the Exchange estimate.

The Marketing Season

The marketing period for the Navel variety is from Thanksgiving to June, and on Valencias from May to Thanksgiving. Fifteen years ago our crop was 75 per cent Navels (winter oranges). Now it is more than half Valencias (summer oranges). The time of ripening and the period of marketing varies considerably, depending on proximity to the sea, altitude and soil conditions. Fruit from

interior valleys experiencing high summer temperature always matures earlier than that from orchards near the coast.

Distributing the Crop

Selling the California orange crop is primarily distribution. The crop is so large, normally over 20,000,000 boxes (50,000 carloads), that to return to its producers the actual cash expenditure of making the crop and preparing it for market requires, first, distribution of each variety over the longest

sent. This determination is based upon data compiled in connection with the movement of previous seasons' crops, business conditions existing in various parts of the country, weather conditions prevailing that have a favorable or unfavorable effect upon the distribution of oranges, and the crops of competitive fruits that are in the market.

F. o. b. selling on the part of the Exchange is confined to pocket markets and the North Pacific territory, which is removed from the general

similar brands to private sale markets.

Sizes on California oranges vary from 64 to 360 to the box. At auction, the various sizes are sold separately, and the prices vary according to the supply and demand of the different sizes. It is now quite generally the practice to quote price by size to private sale markets. It has been found that this system of marketing stimulates the movement of the size that is in the greatest supply and that it encourages both wholesale and retail trade to establish the proper margin on the product.

Accurate Information Secured on Shipments

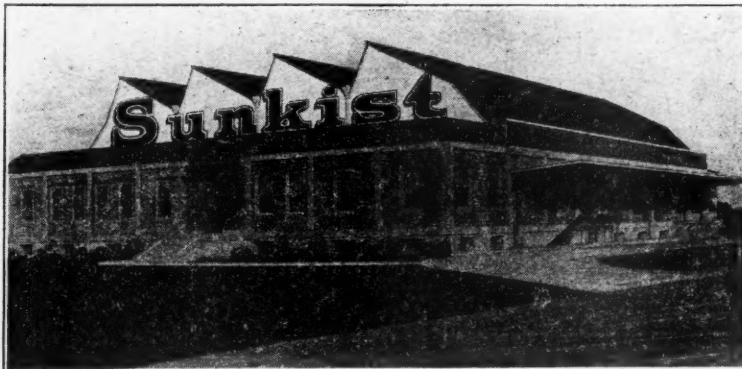
It is not unusual for our organization to have 2000 cars of oranges en route to the various markets of the United States and Canada, and our sales department is informed each day by telegraph as to the progress of these shipments towards their destination, and their arrival in the market. We receive information regarding every competitive influence on our market, and the Exchange acts as a clearing house, transmitting this information to all of its affiliated associations.

We can distribute Sunkist oranges to every market in the country, but our job is only half performed unless we advise the consumer of this fact and convince him that his money will buy more in satisfaction and health in California oranges than in anything else. The Exchange is a pioneer in the advertising of perishable commodities. It is more than 15 years since the growers began the advertising of their oranges to eastern consumers. The advertising appropriation has grown from a few thousand dollars annually until now many hundreds of thousands of dollars are spent each year to acquaint the consumers of the country that Sunkist oranges are not only good but "good for you."

Promoting Dealer Confidence

In 1920, the wholesale trade of the country made heavy losses on practically everything that was handled by them on a speculative basis. They were so discouraged that they could not believe that profits could be made. They were all certain that all products, and California oranges in particular, must sell at extremely low prices. We convinced them that they had nothing to worry about as to the future value of Sunkist oranges, that the growers had financed the growing of the crop, the picking, packing and transportation to market, and that all

(Concluded on page 10.)



One of the more than 200 orange packing houses in California, which are owned and operated by the growers upon a co-operative plan

period in which the fruit can be marketed without deterioration of quality.

Our second problem is the distribution of our fruit moving from week to week and maintaining the proper balance of supplies between the various markets of the country.

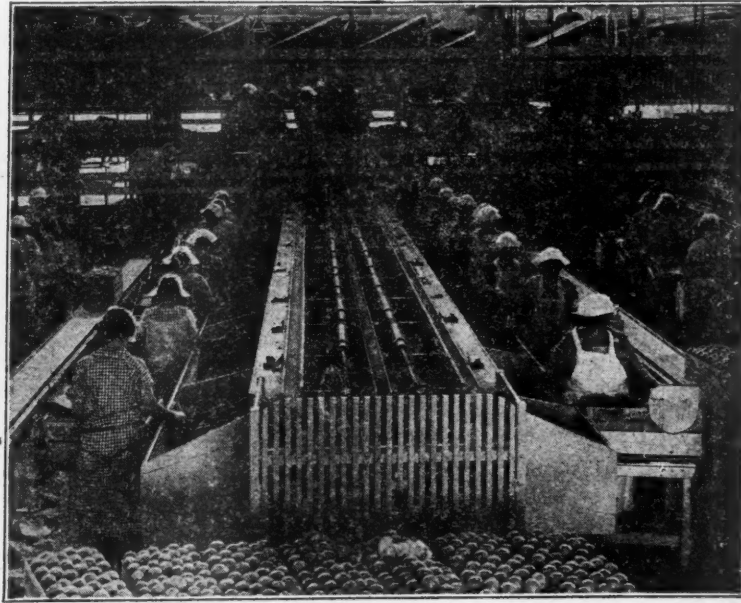
Methods of Sale

In the early days of the Exchange movement, every possible plan of selling oranges was tried. It was thought by many growers that the most money could be secured by selling f. o. b. California, but it soon developed that the eastern dealer desired to buy on that basis only when he saw a speculative profit in sight, and the growers to market their crop were forced to move their fruit regularly, as it should go to market. The result was the adoption of the delivered plan of selling. The industry determines the amount of fruit that shall be shipped and the markets to which it shall be

lines of traffic towards the large eastern markets.

Much Fruit Sold by Auctions

Approximately 40 per cent of the California citrus crop is sold at public auctions conducted in the larger cities of the country, including New York, Chicago, Boston, Philadelphia, Pittsburgh, Cleveland, Baltimore, Cincinnati and St. Louis. Auction selling permits the widest distribution in these large cities at minimum selling expense. The remainder of our fruit, approximately 50 per cent, is sold at private sale, "price on arrival," by the district managers of the Exchange, located in all important wholesale centers. Quotations are made on arrival and inspection of the cars, based upon the general market conditions prevailing throughout the country. Naturally the prices obtained from the fruit sold at auction have considerable bearing upon the quotations on



Left—Dana C. King, orange sales agent of the California Fruit Growers' Exchange, whose department last year handled the shipment of 36,999 cars of oranges and grapefruit, sent to markets all over the world. Right—Orange graders (on the balcony) sorting fruit, and (below) the oranges going through the sizing machine. From the sizing machine the oranges drop into canvas bins, fruit of the same size dropping at the same place between the rollers. From the canvas bins, packers take the oranges and wrap them in tissue paper wraps, after which the fruit is placed in the box

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In This Issue

DURING September the marketing question is a pressing one with most fruit growers and we have therefore devoted this issue largely to marketing.

No attempt has been made to cover the whole subject, for the subject is so large, and has so many angles, that this would be impossible in a single issue or in several issues. We have tried to present information on several of the outstanding problems relating to marketing. Leading articles have been contributed by some of the foremost authorities in the country.

In discussing such a subject as marketing, co-operative marketing must necessarily receive prominent attention, for it is only by that means that the majority of the growers can market their crops most advantageously. And again, co-operative marketing has received a great deal of attention in recent years. We realize that some growers are so located that they are not interested in co-operative marketing. Again, many growers who are members of co-operatives may feel that such problems as financing, inspection, and selling are problems of the officers and employees, and that they therefore do not need to bother themselves about such problems. However, co-operative marketing is such a vital subject in agricultural progress, as well as in the entire economic life of the nation at the present time, that every live grower will acquaint himself with the principles of it, no matter whether he is directly interested in co-operative marketing or not. The co-operative members who acquaint themselves most thoroughly with the principles involved will thereby make themselves the best members and will help to insure the success of their organization.

While co-operative marketing has received prominent attention, other phases have not been neglected. For instance, the article on roadside marketing gives excellent advice on this subject, in our opinion. We planned to include an article on home marketing by an Ohio grower who has been particularly successful along this line. The season's work prevented him from preparing this article in time and it will be presented later.

We have tried to confine the issue chiefly to the principles and have not attempted to

describe the methods or to present the cause of any particular organizations. If certain organizations have been mentioned, this has been done for the purpose of describing the principles involved.

We should appreciate your opinion regarding this issue. If it is good, we want to continue the idea another year. If it is not, we want to abandon it immediately.

Keep Your Eye on the Principles Involved

CO-OPERATIVE marketing is so well established in the west and in certain other localities that it is accepted as a matter of fact. Since the war there has been a tremendous development of co-operative marketing in the Middle West and East, and growers in those places are still in the beginning stages. As always happens in such developments, many things have occurred which tend to discourage growers. Some associations have failed. Others have proved disappointing. Some have been ground to pieces by the ambitions of opposing factions. In many cases, the relief has been less and slower than was expected.

These things are to be expected when one considers the circumstances. In the first place, we must remember that we are trying to replace a worn-out system, controlled by speculative and private interests, by a grower-owned and grower-controlled system of marketing. It is no small matter we are attempting. It amounts virtually to an economic revolution, and many people, even in high places, will not realize its significance until it is over. We must build this new movement against the fully established system in existence, and we can expect a full measure of opposition from selfish interests. This opposition can and is being successfully met, chiefly because the new system is more efficient than the old.

Secondly, we must remember that the recent co-operative movement started almost out of a clear sky, following the depression after the war. There was a scarcity of efficient leadership, and mistakes in the methods of organization and operation were to be expected.

Again, co-operative marketing was a brand new thing in many states. Public sentiment was not ready for it. Adequate laws were not in existence. These factors had to be taken care of and this has been done in most places.

Another discouraging factor has been the behavior of some individuals connected with the movement. Some leaders have proved inefficient, some dishonest, and some have placed their own private interests above those of their organization. The speculative interests have multiplied and magnified such matters, and unfriendly newspapers have in some cases exaggerated such reports out of all proportion to their importance, whether true or false. Is it any wonder that a grower should become discouraged and luke-warm under such fire? But after all, we must remember that selfishness and dishonesty are common among human beings and we may expect to find them wherever people are found. They are found in other lines of business as well as in co-operative marketing.

Considering the circumstances, we should expect some of the co-operatives to fail, but this does not mean that co-operative marketing is at fault. Failures occur in other lines of industry as well. For instance, banks frequently fail, yet no one believes banking is an unsound proposition as a result. Financial reports show that the percentage of failures of co-operative associations is smaller than that of other lines of business in general. Some co-operative associations are as successful as any commercial organizations in existence.

The failure of co-operative marketing to accomplish everything expected of it in the short time it has been tried should not cause anyone to lose faith in the movement. The principles of co-operative marketing are sound and will place agriculture on a better basis if given a fair chance. When other things threaten your loyalty and faith, think of the principles involved, and think what the working out of these principles will mean to agriculture. Such a frame of mind will make it easier for you to do your part to help put the movement through.

Co-Operative Marketing Not a Panacea

IN THEIR eagerness to promote co-operative marketing, many persons have made extravagant claims for it. Even some of our capable leaders, who certainly know better, have made the most startling claims for it. Such statements do more harm than good.

There are certain things that co-operative marketing will do and certain others that it will not do. Wise leaders will clearly state these things even though organization in certain cases may be delayed. In the long run, better results will be secured.

Co-operative marketing will help to promote better growing methods and better methods of grading and packing. It will help to reduce the cost of preparing the products for marketing and of selling the products. It will enable growers to secure wise distribution of products as to time and place. Co-operative marketing permits growers to build up a brand and reputation for their products on a larger basis and to promote increased consumption through advertising. These advantages will enable growers to make larger profits on their crops.

But far stronger claims than these have been made. The writer has frequently heard it claimed or suggested that co-operative marketing would enable growers to set their own prices. Such statements may appeal to prejudiced minds, but they are misleading. After all is said and done, we must remember that the law of supply and demand is at work, no matter whether co-operative marketing is in existence or not. It is true that manipulation, speculation and market psychology affect prices at times, but in the main, the law of supply and demand is the chief factor in determining prices. When crops are big, prices are bound to be less than when crops are small. If an association controls a sufficient proportion of the products, growers can thereby most evenly balance the supply of products for the season and the country at large against the total demand for the season and country at large. In this way, co-operative marketing will help to bring about the most normal operation of the law of supply and demand, but it cannot under any circumstances set aside this law.

There are other serious problems in agriculture besides those which co-operative marketing can solve. For instance, there is the tax problem, the transportation problem, the problem of more efficient production, and the problem of getting the government to change its viewpoint toward agriculture so that the industry may be placed on a parity with other industries. The latter problem is one which directly concerns food producers, but in a general way, it is a serious problem for the entire country, for no country can best thrive without a prosperous agriculture.

The co-operative leaders who adopt a balanced viewpoint toward co-operative marketing will get farthest and will last longest in that important work. One never makes a mistake by stating plainly just what a thing will do and what it will not do. Extravagant claims are sure to cause a back-fire sooner or later.

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Reorganization of the Florida Citrus Industry

by W. A. MacKenzie

CO-OPERATION is a golden word which has been shining through all of civilization's successful endeavors since that momentous hour when a dying prophet of Galilee swept away, in his death agonies, all the worn, false doctrines of selfish individuality.

Exchange Survives Through Hardships

Co-operation simply means working FOR and WITH each other. The Florida Citrus Exchange, apostle of co-operative marketing, was born of necessity in the darkest hour of Florida's fruit industry; an hour when prices were ruinous and the grower was at the mercy of selfish interests who were growing richer as he grew poorer. The infant was a lusty one—else it could have never survived the vicious attacks that were made upon it at its birth and through its years of growth and usefulness.

The fact that it has survived in the face of bitter opposition and almost unsurmountable obstacles shows that it has not only been conducted with a fair amount of efficiency but that its perpetuation has been an absolute necessity to the citrus industry. It has been a beacon light of hope to the citrus growers of Florida. Yet, at the door of those growers may be laid the blame for a lack of full, virile functioning of this—their greatest aid.

The Florida Citrus Exchange has made mistakes. It will continue to make them—for only perfection does not. And perfection means fulfillment, the end of things, stasis and beginning decay. This organization has learned its painful, yet useful, lessons by the evolutionary method of trial and error—a going forward and a slipping back—yet each year has found its path farther up the heights of progress. Yet it has never been able to fully demonstrate what co-operation could and would do for the growers, for the simple reason that the latter have never given it the opportunity of putting real co-operation into effect.

Succeeds in Obtaining Greater Control of Crop

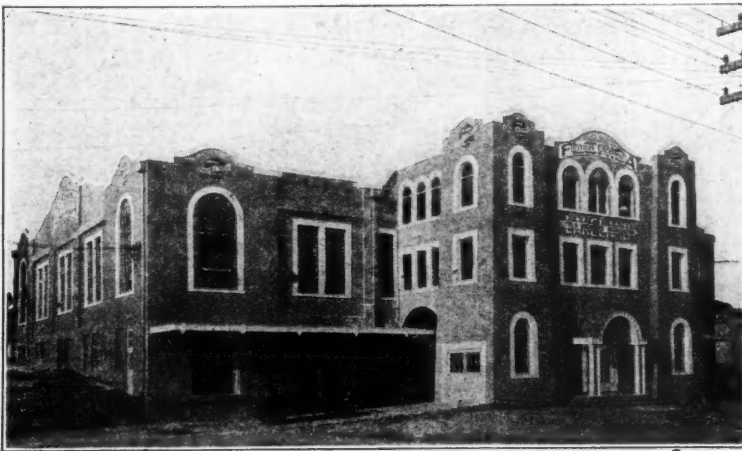
The Exchange has grown slowly and surely—yet, its highest mark was the control of 35 per cent of the fruit. Mathematics have never blazed a trail by which 35 per cent of a whole could co-operate with 65 per cent, when that 65 per cent, or a large part of it, was playing a deadly negative to its utmost positive. Tails may wag dogs but not for long. The 35 per cent tail did act as a stabilizing agent and did make the dog behave reasonably well. But, when in 1923, rumor, panic and fear gripped the citrus industry in their clammy embraces, tail and dog were run over by the archaic marketing machine of our forefathers dashing madly down the trail of ruin and were left crippled by the roadside.

Prophets of pessimism, as is their wont, immediately predicted ruin for the citrus industry and, as usual, gave the wrong causes for the debacle. The wail of "too much fruit" was abroad in the land. The facts remained, however, that the entire citrus crop of the United States would give each individual in America one orange or one grapefruit per week—a small fraction of the needed amount to give American people their vitaminic growth. While the prophets continued to croak and the citrus grower to receive practically nothing for his product, the consumer continued to pay top retail prices and to consume all the fruit offered. Wise men woke up and found that the trouble was not too much fruit but too little fruit of the right kind, at the right place, at the right time. These same men realized that to travel a given distance by motor required a given amount of fuel. The Florida Citrus Exchange was trying to reach

prosperity with 35 per cent of controlled fruit, not enough fuel in its motor by approximately 65 per cent.

The Lake Wales Plan was put into operation—a campaign of four weeks' duration, backed by business men—with the object of putting 60 per cent of the fruit under control of the citrus industry. That plan succeeded. The writer had the honor of making 32 speeches in 15 days for this enter-

The directors are now perfecting an entire new sales plan. They have gone on record as favoring the f. o. b. plan of selling for cash here in Florida. Sales depots, manned by an efficient sales corps, will be put in important centers, such as Lakeland, Orlando, Tampa and other places as development shows they are needed. Auction sales methods will be used only as necessary and auction mar-



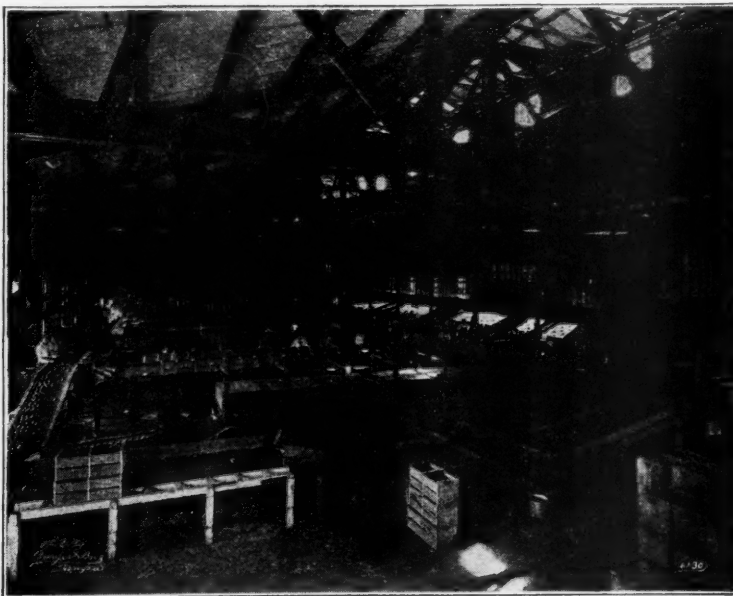
Exterior view of the Lakeland Citrus Growers' Ass'n

prise. The Florida Citrus Exchange then took up the campaign to get more fruit under its control and, at the present writing, has probably 70 per cent of the fruit crop under its control.

Exchange Remedies Its Own Weaknesses

Having attained this desired end, the Exchange did not rest on its laurels, go to sleep or exhibit smug satisfaction. It immediately got busy

kets will be given only the kind of fruit that auction markets demand and a little less quantity than they can readily and profitably dispose of. The advertising appropriation will be enlarged at less cost per box because of a greater number of boxes under control. A scientific survey of the consumers' territory will be made and such territory properly blocked and covered by high-class salesmen. The shipping of green fruit and fruit of poor quality will be discouraged



Interior view of the Winter Haven Citrus Growers' Ass'n

in remedying some of its own weaknesses. These it could not remedy before because it did not have the power within to accomplish such ends. It expanded its directorate and elected L. B. Edwards, a really big man and an experienced fruit grower, as its president. It chose other officials of experience and ability. It is now busily engaged in strengthening its sales plans and in extending its avenues of usefulness. Its failure in the past has been not because of personnel but because of limited power to do the things it knew to be best.

and the Legislature of Florida urged to pass a law absolutely prohibiting the shipment of immature fruit. The voting power in the various sub-exchanges will be put on a box basis.

The Exchange has disposed of its fertilizer plant and will confine its energies to the efficient and profitable marketing of Florida's greatest crop.

Educational Campaign Being Projected

An educational campaign is being projected with the idea of creating

new demands and new uses for citrus fruit and their by-products. More economical and more efficient methods of picking, packing and distribution are under way. The various exchanges will be urged to market only such fruit as will meet the high standards that the Exchange brands promise to the consumer, thus increasing the value of the copyrighted brands marketed by the Exchange. Later on, a determined effort will be made to open up foreign markets, avenues heretofore but casually explored. By-products, such as canned grapefruit, fruit juices, marmalades, preserves, etc., will be given merited attention, and plans for their efficient production and marketing are being made.

When the volume of fruit increases as the Exchange grows, as it certainly should, a scientific research department will be instituted by the Exchange, which will be of great aid to the grower in the solution of the many problems of growing, caring for, picking, packing and marketing his product.

Will Attempt to Bring About Reduced Freight Rates

With the great number of growers enlisted under one co-operative band of power and influence, the Exchange will exert a mighty influence in bringing pressure to bear for the reduction of freight rates. If the railroads fail to read the handwriting on the wall, the rapidly developing waterway system of Florida will be utilized in shipping fruit refrigerated by this more economical highway to the North. Growers will be educated and urged to reduce the number of varieties of oranges and grapefruit raised and to confine their efforts to growing a fewer standard varieties of the best qualities possible. Later on, the Florida Citrus Exchange contemplates co-operative association with the California Citrus Exchange. If this be accomplished, both California and Florida will profit in that the fruit products from both states can be marketed in a way offering less competition and greater profit for the growers of both states.

The Florida Citrus Exchange is fundamentally right. Its methods have been fundamentally right, yet those methods have never reached the high degree of efficiency hoped for because of the anemic support given to this, the growers' greatest friend by the growers themselves. The Exchange, with its 35 per cent of fruit, has been able at times to co-operate with some of the larger independent marketing agencies controlling about 20 per cent of the fruit. However, both the Exchange and the larger independents have had their greatest efforts fail because of the remaining 45 per cent of maverick fruit unwept, unhonored and unsung, which usually went how, when and where it was wanted the least.

The Florida Citrus Exchange with 75 to 80 per cent of the entire fruit crop under its control can efficiently co-operate with those independents who may efficiently, honestly and sincerely control and market the remaining 20 per cent.

Growers Must Be Patient

The coming year will be one of reorganization and of laying plans for the future. The grower must not become impatient if ALL his problems are not solved in one season. It will take two, three, or probably more seasons for the Citrus Exchange to work out to their fullest degree of efficiency the plans of progress it has made. If personnel weakens, personnel can be changed. If plans and methods need strengthening, this can easily be accomplished. The responsibility for the success of the Florida Citrus Exchange and the prosperity of the Citrus Exchange rests wholly with the growers themselves. If these growers are patient, realizing that

(Concluded on page 24.)

Essentials in Successful Roadside Marketing

by James H. Buswell

THE YARD in front of the farm home should be, to the owner, what the show window is to the merchant.

J. H. Van Brussel, of Battle Creek, Mich., thought this way five years ago. His home looked exactly like the picture, when my wife and I were attracted by the neat blackboard in front of his place and stopped to try some of the cottage cheese that happened to be "chalked up" on the blackboard on that particular day five years back.

Van Brussel still thinks so—only more so. I talked with him the evening of July 31, 1924. We paid 25 cents for another pound of that cottage cheese, fine-grained, creamed and nicely seasoned, tasting almost exactly like it did five years gone by. Only today there is a wide concrete road that passes Van Brussel's farm and he has rebuilt and beautified the house, hired a man, widened the drive and put up another and bigger sign. He sells everything "by the yard"—everything but his wife and two happy children. He sold six pigs one night after nine o'clock. In my humble opinion, he has solved the farmers' marketing problem. He cannot raise enough golden bantam sweet corn, peaches, pears, grapes, apples, eggs, broilers, big brown Barred Rock eggs, home-cured hams and bacon, cheese, butter and berries to keep up with the demand that comes to him without his expending a penny for transportation.

The Big Four in Roadside Selling

Mr. Sheppard, the Ancona King, of Berea, Ohio, says that the way to sell farm produce at a profit is to keep four L's in mind: Look, like, learn and "land."

Suppose we see how that works out in Van Brussel's case. Go back with

me to the evening of July 31. A close clipped green lawn, white painted stones, neat gravel drive, two neatly lettered signs (all words spelled correctly and the letters formed properly—no left-handed S's), nicely painted buildings, a flock of thoroughbred barred rocks, clean, happy, healthy children, all combined to catch the eye.

We looked and we liked. Hundreds have been doing the same. Now, it is not enough to make people look. A side-show freak can do that. Be care-

ful that people do not dislike after they look. It is almost impossible to get a good price even for good goods unless the surroundings look like quality.

If the general appearance of the farm, from the road, is pleasing so that people are impelled to look and like, then half the battle of profitable roadside selling is won.

Parking Space Important

What about the other half? In order to sell, you've got to tell. And

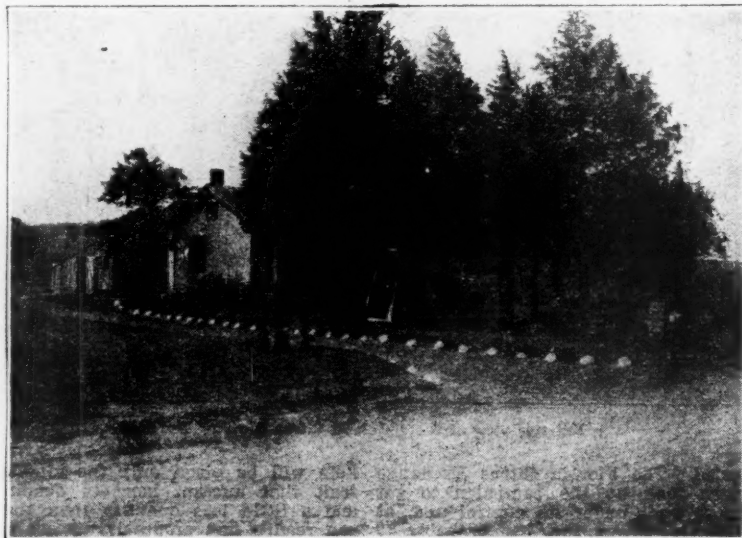
right here let me say that it is by no means easy to "stop and shop" at Van Brussel's. The drive is still too narrow. There is no parking area right out next to the pavement. The ideal plan of making it easier to "stop and shop" rather than to drive along past is to gravel or pave right up to the edge of the public highway for a considerable distance in front of the yard. Dozens of times the little sign "Drive In" never catches the eye until the driver is several rods down the road. Get in your car, drive at a clip from 20 to 35 miles, and notice how few roadside signs, private driveways and booths "flag" your eye and make it easy to stop.

Near Bangor, Mich., in the heart of the apple country, is a little Blue Bird shop run by two of the dearest old ladies. But—driving from the west there is a tree that hides the sign and part of the shop until you get right beside it. The driveway is narrow and there is no parking space anywhere in sight. These ladies are eager for trade, they have a quaint little shop, prices are fair, but the arrangement of the yard almost says "Keep Out." They do not make it easy to stop and shop.

Clinching the Sales

The average individual will never reach the point of learning about what you have to sell unless it is made easy as pie for him to apply the brake and come in and examine the goods. The third step, what Sheppard calls "learn," is the telling process. Mrs. Van Brussel removed the top from a strong paper container, permitted my wife to see the smooth texture of the cottage cheese; see the yellow of the cream, the flecks of pepper; smell the sharply pungent quality of good cheese—and that was

(Continued on page 12.)



The well-kept entrance to J. H. Van Brussel's farm home

Financing Fruit Co-operatives

by Charles J. Brand

United States Department of Agriculture

THERE are so many different kinds of co-operative associations among fruit growers that it is not possible for all of them to proceed alike in providing themselves with money and credit. The problem of the individual fruit growers' exchange or association, operating one packing house at a local point and marketing its products through an existing privately-owned national marketing organization, or through individual commission firms, is one thing. The problem of the California Fruit Growers' Exchange, which owns a complete national marketing organization and is made up of 192 local units, each owning its own packing house, is quite a different one. This difference is accentuated when one recalls that the Exchange owns two large lumber operations with appropriate sawmills, box factories and similar facilities, and two important by-product plants, one for the utilization of unshipped oranges and the other for lemons.

From the foregoing, it is obvious that the methods of financing of any particular co-operative association necessarily depend on many factors. Money is a very shy commodity. Owners of the "long green" are timid to the point of being fearsome. Many loan agencies, whether city or local banks, financing companies, marketing agencies, individual capitalists or participating members, must feel assured that the credit worthiness of a co-operative is such as to insure repayment of loans not later than the end of the term for which they are made. If this feeling of confidence is absent, money will be hard to get or interest rates will be oppressively high.

Kinds of Financing Needed

The methods of financing any of the needs of a co-operative association will to some extent be governed by whether the organization is a non-capital stock, non-profit organization, or

whether it is a capital stock organization operated on co-operative lines. Particularly with respect to plant investment, capital stock organizations possess some advantages on the average.

Let us first consider the two great general classes of purposes for which not only every co-operative but also every corporate or individual enterprise needs financial assistance.

Permanent Capital.—Fruit associations in particular although they may upon occasion be able to employ at a rental or under contract the necessary packing facilities for handling their crops are generally unable to do so and hence must buy or build packing houses, outfit them with suitable machinery, and procure other assets of a permanent nature.

Money for such purposes is usually obtained either by sale of stock, or by the sale of bonds, or by borrowing from banks, insurance companies, or other agencies whose loans are repaid gradually over an extended period by the assessment of a definite amount per package against the product of the members.

When no capital stock is issued against assets of this character, there is always some question as to the fairness of the method by reason of the fact that the heaviest producers contribute the largest amounts to the provision of the facilities, while the facilities themselves, once they have been paid for, are the common property of all of the members, share and share alike if the organization is a non-stock organization.

In the case of co-operative associations that do not have marketing outlets of their own, marketing companies sometimes advance the capital for

the construction of packing houses, escrowing a deed of trust to the building, ground and machinery as security for their loan.

Sometimes a sinking fund is created in the treasury of the association to pay off the loan. Under other circumstances, the marketing agency is permitted to withhold a specified sum per unit of product marketed until such time as its loan is repaid when title vests in the association.

Operating Capital.—Operating capital needs of co-operative associations vary even more than the permanent capital needs. An association or exchange that sells the major part of its product f.o.b. track at loading point, needs much less credit than one that makes largely destination sales, whether on consignment or otherwise. An organization like a citrus exchange or apple shippers' association, whose products are pooled both as to variety and time, has credit needs suited to its particular exigencies. Apple pools range in length from a single carload in a single shipment to nine months' pools covering all of the shipments of certain varieties until the close of the storage period, which sometimes does not occur until July.

Purposes for Which Associations Need Credit

For the purpose of our discussion, we are considering more particularly the needs of associations as such rather than the needs of the individuals composing them. Despite this, the associations' needs are merely an expression of the individuals' needs. Without aiming at catalogue completeness, the following are the chief factors that create credit needs of associations.

1. For general expenses, supplies, salaries, advertising, freight, interest and all other expenses of any going concern handling and distributing perishables.

2. For advances to grower members (a) during the production period including the period of pruning, spraying, cultivation, etc.; (b) during the harvesting period, including wages for picking, packing house and hauling help; and (c) for the purchase of supplies of all kinds to be advanced to growers, including such materials as fertilizers, spray materials, boxes, labels, papers, etc.

3. For paying growers during the interim between the delivery of product to the packing house and the receipt of proceeds from the markets. It is customary to pay growers not less than 75 per cent of the current market value of non-pooled products at the time of delivery or very soon thereafter. The balance of the proceeds is remitted when sale in the market has taken place and proceeds have been remitted to the association. The final settlement contemplates the deduction of all necessary marketing expenses, including freight, commission, refrigeration, brokerages of all kinds, and similar items.

4. For purchasing products from both members and non-members according to policy for resale.

Some co-operative associations, such, for instance, as the Wicomico Farmers' Ass'n at Salisbury, Md., where strawberries in particular are sold on the association's auction, make it a practice to buy for cash the grower's load and issue a check to him immediately in payment for the product. This condition is to an extent forced by the competition of private buyers. Not only is it customary to buy a member's product but under certain conditions non-members' products, with a view to regulating distribution

(Continued on page 11.)



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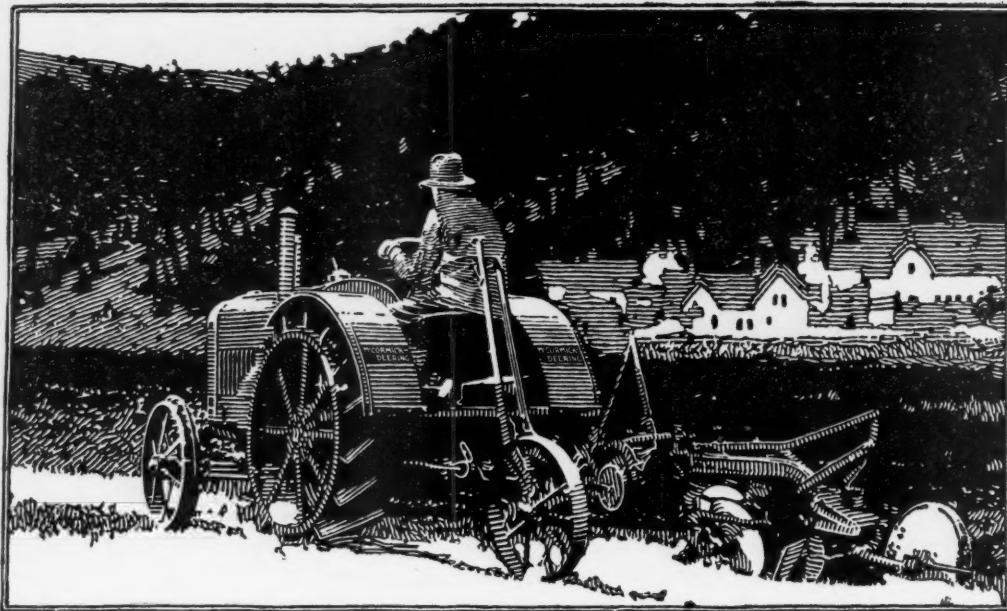
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This Outfit Is On Thousands of Fields PUT IT ON YOURS—

Your fall work would be a lot easier and more profitable all around if you had a McCormick-Deering 2 or 3-plow tractor turning the soil and doing late summer and fall belt work.

Now is as good a time as any in the year for a man to come into McCormick-Deering tractor ownership. Weeks of hard work and hot weather have been exhausting man and horse. Many weeks of trying work lie ahead. Labor is scarce and high-priced and every week's wages takes money out of pocket. Plowing, the slowest, most laborious, most expensive farm work stares every farmer in the face.

With the McCormick-Deering 15-30 tractor one man plows 12 acres a day; with a 3-horse team he averages

only 3 acres. With the tractor he does 4 days' work in 1 day.

With the tractor he plows deeper and better, and at the right time; heat and hard ground don't stop him; he saves the moisture and gets ahead of weeds. Between-times his tractor tackles the corn harvest—runs the binder and picker, fills the silo, runs shredder or sheller—and then it finds all kinds of winter belt jobs ahead of next spring's work.

Farm product prices have taken the upgrade. Better times are on the way to the farm. Be in position to farm efficiently all the year, without yielding your profits to surplus labor costs. See the dealer about a McCormick-Deering Tractor—lasting, dependable, all-around farm power.

Some of the Good Things About McCormick - Deering 10-20 & 15-30 Tractors

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Drawbar—Belt—Power Take-Off
Life Guarantee on Crankshaft and Main Bearings
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Durability—Long Life

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave.

OF AMERICA
(Incorporated)

Chicago, Illinois

Selling California's Orange Crop

(Continued from page 5.)

that was needed was the wholesaler to merchandise the article, buying the fruit as he could sell it, adding a reasonable profit to his cost price, and that if he did this he could do a normal volume of business and make a profit on every package he handled. The result was one of the most satisfactory seasons ever experienced by the wholesale trade, and the crop was marketed with fair results to the California producers. As compared with this result, the distribution and sale of crops that depended upon speculators to finance, transport, warehouse and distribute "broke down" completely.

In the course of the Exchange development, it has been suggested many times that our people should attempt to perform the service of both wholesaler and retailer in the distribution of their crop, but after thorough analysis and careful considera-

tion, our organization is convinced that the wholesale and retail fruit dealers can perform the service of distribution on a specialized crop such as ours as efficiently and at as low a cost as could be secured by any other method. With this recognition, our constant effort is to work with these distributors and show them how more fruit can be sold if properly displayed, featured and reasonable margins adopted. For many years we have compiled records of wholesale and retail selling prices in the important markets of the country. We maintain a force of Dealer Service men constantly working with the retail trade to show them that nothing attracts so much interest in a retail store as an attractive display of fruits and vegetables, reasonably priced. We work to show them that perishables do not need to carry unusually high margins as many retailers have believed, that due to the rapid turnover of perishables, they can really adopt lower margins than on many other articles which sell more slowly. We have determined that retailers should not pur-

chase more oranges than they can sell in a week. This policy will give them 52 turnovers a year, practically eliminate shrinkage, and on a margin of 25 per cent of the selling price, show them a greater profit than any department in their store. We appreciate that the dealer will always handle the article that will show him the most profit, and that we must convince him that it is to his interest to exert the maximum effort on oranges.

The result of the effort of the California growers to distribute their products through their own organization on a merchandising basis has been a tremendous increase in the quantity of fruit sold, and has given to the consumer a product of quality and value that could not have been secured without co-operative effort. By co-operation, these growers are developing markets for their product in all parts of the world, and are constantly working collectively to solve the problems that are certain to face their industry, and that could not be met individually or would not be solved by speculative operators interested only in immediate profits.

South Water Street to Pass Into History

THE FAMOUS South Water Street produce market in Chicago, known all over the world for its congestion, inefficiency, waste and other things, is soon to pass into history. There have been reports for several years that the street was to be taken over by the City of Chicago and converted into a double-deck boulevard and heavy hauling thoroughfare. But the dealers apparently did not take these reports seriously and continued to do business at the old stand.

The city, however, has been earnest, since this proposition is part of the plans of the Chicago Plan Commission, which has brought about some excellent improvements for Chicago. Recently Judge Oscar M. Tarrison entered the final order for condemnation proceedings under which the city comes into possession of sufficient land to build Wacker Drive.

The upper deck of the new thoroughfare will be a boulevard for light traffic and the lower deck will be for heavy traffic. The new drive will open up a way for traffic between Michigan avenue and the railroad stations and boulevards on the west side of the river, and it will also open up a way for heavy traffic between the Illinois Central freight station along the lake, and the Union and Northwestern stations on the west side of the river. The drive will also relieve automobile and traffic congestion at the north end of the loop.

Coincident with this news comes the announcement that the produce men have organized and have purchased a tract one mile long on the south side of the Chicago river and Drainage Canal between Ashland and Western avenues. The claim is made that a new market will be built which will be the largest, finest and most modern in the world. A group of buildings is to be erected in three-story units, each to contain fifteen 20 by 100 foot stores. These will be refrigerated from a central plant. A 10-story administration building is under consideration. Construction will begin at once and it is expected the market will be ready for use in nine months.

The new market will accommodate 2140 refrigerator cars. It is planned to do a lot of the unloading directly into trucks of grocers and commission houses, thus diminishing the damage from delay and lowering the expenses of handling.

About 20 firms are back of the project. The Chicago Fruit Terminal Co. is to be the holding concern and the market is to be operated by the Chicago Produce Terminal Exchange. The market is to be operated and owned entirely by commission men without railroad participation.

All of this sounds very well, but the question presents itself as to whether the interests of growers and consumers will be considered in the arrangements for the new market, or whether the proposition is to be organized and conducted solely in the interest of dealers. It would seem that in such a venture as this, in these days when the spirit of co-operation exists in most lines of business, the dealers would at least seek the counsel of representative growers and the consuming public in planning and operating this new market.

BANANA growers in Florida are making preparations for the annual meeting of the Florida Banana Growers' Ass'n, which will be held in Winterhaven October 29. About 400 attended last year and it is expected 500 will be present this year.

EVERY time I receive my monthly number, I feel impelled to write and say what a fine fruit grower's paper yours is. I have put it off until now, but I now congratulate you on its production and will say that there is nothing on this side, or on your side, fit to be compared with it.—E. P. Francis, England.

Financing Fruit Co-operatives

(Continued from page 8.)

and avoiding gluts in some markets and shortages in others.

Sources of Credit

Co-operative associations are receiving extensions of credit at the present time that they have never enjoyed in the past. Very generally, these associations are under-financed. I recall an organization that in a single season handled \$682,000 worth of its members' products, with a capital of \$10,000. The association, operated at cost, was compelled to consign a moderate number of cars at the end of the season on which it lost \$11,000, or \$1000 more than its total capitalization. It must not be assumed from this that the association was not efficiently managed, for in my judgment it was. Furthermore, it performed a service of very great value to the producer. He lost \$11,000, but he received in proceeds possibly \$30,000 or \$40,000 more than he would have received had private speculation controlled the marketing of his crop.

Local Banks.—As a class, local banks are probably the most important source of credit of co-operative fruit growers' associations. The newly formed co-operative has difficulties in borrowing that do not afflict the organization that has been in operation for a period of years and has built up a record of repaying its loans at maturity. As a result, there is a difference in the character and amount of security required. Some new co-operatives, by reason of the high character of their membership, borrow quite as advantageously as the older ones.

Local banks usually exact as a minimum security the note of the association signed by one of its officers or employees, such as the general manager, provided they are authorized to sign by the board of directors. Others require the signature of the full board of directors. Still others require the hypothecation of securities as security for such notes.

In some cases where associations have property and their credit standing is not established, or of a dubious character, the escrowing of a bill of sale to its tangible assets has been required. In still other cases, mortgages on the crops of the members are required to be filed in the portfolio of the bank along with the association's notes.

City Banks.—Some of the large co-operative fruit associations have their principal offices in cities of some size. This, for instance, is the case with the California Fruit Growers' Exchange. Organizations thus located are frequently fortunate in their ability to borrow even to the extent of large sums, either upon an open line of credit or on notes signed by specified officers.

The participation of city banks in financing fruit co-operatives is not as great directly as it is in the case of some of the organizations that market staples, such as wheat, cotton and tobacco. The part played by city banks is nevertheless very large indirectly, by reason of the fact that they rediscount the paper of the local banks, so that millions of dollars' worth of local co-operative paper finds its way to the large city banks.

Particularly in the case of products suitable for warehousing, either in common or cold storage, such as potatoes and apples, city banks make large loans in the aggregate against warehouse receipts, either deposited directly by the associations or through the intermediation of the bank that makes the loan direct.

Marketing Agencies.—Many co-operative freight associations are financed by the agency that markets the association's products. This naturally applies more particularly to the smaller organizations that do not have direct market outlets. In the case of these, it is customary to make a marketing contract, either with a large organization, such as the Federated Fruit

and Vegetable Growers, Inc., the American Fruit Growers, Inc., the California Vegetable Union, or private marketing companies, who, in return for the tonnage thus contracted for, agree to make advances up to a specified amount per package or per car of product thus covered.

Organized Loan Companies.—A few companies have been organized for the specific purpose of loaning to members of specific co-operative organizations. One case of this kind is that of the Growers' Loan and Guaranty Co., organized by the officers of the Florida Citrus Exchange for the benefit of its membership. This company finances not only the local association members of the Exchange but individual grow-

ers. Forty-five per cent of its loans were to growers and 55 per cent to associations. It limits the loans to any grower to 50 per cent of the estimated market value of his fruit. Its highest loan to a single grower is said to be \$12,000, but the great majority of the loans range under \$2000. Notes to secure loans are drawn for 90 days but are usually renewable once or, under special circumstances, twice.

In making application for loans, the grower is required to specify not only the amount desired and the length of time but he must describe his grove, giving its location, all facts regarding its ownership and the ownership of the fruit, whether there are any liens upon the property, and he must also

make a statement concerning the care that has been given the trees as to fertilization, cultivation, spraying, etc.

The company further secures itself by taking a mortgage on the fruit, which the grower is required to insure at his own expense. Last, but not least, the grower is required to market his fruit through the Florida Citrus Exchange.

Intermediate Credit Banks.—The needs of co-operative associations may also be financed indirectly by the intermediate credit banks established under the Agricultural Credits Act of 1923. These banks are really a department of the Federal Farm Loan Board. A financial organization like that de-

(Concluded on page 15.)

SOUND VALUE

Sound products evolve from sound principles.

Dodge Brothers Motor Car is the product of an institution whose principles have always been conceded to be pre-eminently sound.

Sound manufacturing methods that place infinitely more importance on quality than quantity—

Sound financial standing, which permits uninterrupted development and adherence to the policy of constant improvement—

A sound method of selecting dealers, from which an organization has grown that enjoys the complete confidence of the public—

A sound sales and service policy, through which buyers are assured full value for their investment—

These basic principles being sound, it follows as an obvious consequence that Dodge Brothers Motor Car represents sound value.

DODGE BROTHERS DETROIT
DODGE BROTHERS MOTOR COMPANY LIMITED
WALKERVILLE, ONTARIO



FACTS ABOUT A FAMOUS FAMILY



Thousands of General Motors employees have become home owners through the Savings and Investment Plan.

A family of savers

For each dollar which an employee puts into its Savings and Investment Fund, General Motors contributes 50 cents and pays 6% interest on the amount standing to the employee's credit.

Today over 45% of the eligible employees are participating in this plan; and those who began saving in 1919 will this year receive better than a two-for-one settlement on the amounts they paid in.

A big corporation is just an army of "folks" and the quality of its product is bound to be better when men and women have the opportunity to make steady financial progress.

GENERAL MOTORS

BUICK • CADILLAC • CHEVROLET • OAKLAND
OLDSMOBILE • GMC TRUCKS

General Motors cars, trucks and Delco-Light products may be purchased on the GMAC Payment Plan. Insurance Service is furnished by General Exchange Corporation.

Essentials in Successful Roadside Marketing

(Continued from page 8)

"education" aplenty to "land" the sale.

After a new customer or one of your old patrons has made the purchase for which they originally stopped, remember that they are "ripe" for other things you may have.

Van Brussel disposed of a large surplus of cockerels at a fancy price in just that way. Someone would stop for butter, eggs or cheese. They'd see the flock in the big yard near the house. Perhaps Dad would say, "When do we have another chicken dinner, mother?" and that would be the cue for Van Brussel to suggest that if they would pick out a cockerel he would get it for them. Of course that led to an explanation of weight (about three pounds late in July) and the price (35 cents a pound live weight) and the fact that they were fattened on buttermilk. They looked, liked and learned—and were now just waiting to be "landed." Van Brussel would step into the house, get his little rifle and ask "Which one?" The lady would point out one and Van Brussel would "ping" it in the head.

Unconsciously, Van Brussel practices those four elements. In my 18 years of investigation into many, many effective advertising and selling plans, I have never run across better strategy than the way this farmer sells his broilers.

Seeing Is Believing

Roadside has a distinct advantage over mail order or telephone selling, because the customer can see the goods. The sight of the goods should inspire confidence. Perhaps you have tried to sell a horse by talking. But just about when you think the man is ready to trade or buy he says, "Let's see the horse!"

If the customer can see or smell the quality in the goods, you can get what they are worth. Price won't worry you—or your customer—if the quality is in the goods.

Over near the eastern shore of Lake Michigan there is a peach farmer who forces selling to a high point when his peaches are prime by this plan. He is on a main trunk line, so a veritable "mountain" of peach baskets in his front yard naturally stops many transients. But this man has a "Visitor's Book," in which he asks each new customer to inscribe his or her name and address. Most of them are tickled to do it. A week before the fruit is at its best he sends printed government postal cards to all these names in his book. He has been careful to get the street addresses. Having practiced this plan for several years, he now has about 500 names. As a result of this postal, he secures mail orders, but he also notes a bigger roadside demand for his peaches the week after mailing this card.

How to Make Customers Come Back

Thus far we have considered a few ways men employ to get business. How do they keep it? After all, the best trade is the trade that comes regularly. The 25 to 50 families who swarm out to your place whenever you telephone or write them that the peaches are ripe! The people that stay with you year after year. How may such patronage be kept?

The answer is in three words: Give them quality.

The very fact that they come to the farm after it, ought to assure the customer that everything is "fresh as a daisy." Van Brussel always inspects each ear of golden bantam sweet corn, for instance, to be sure that it is well filled out. He sells today's corn today. The woman who takes home a dozen ears of corn from the farm will seldom go back for more if the corn is old, or if half of the ears are green. A low price is never a satisfactory excuse for poor quality.

Quality Products Bring the Trade

I am not going to use names this time, but I have in mind two farmers. They live across the road from one

another. One is careful first to put up everything so that it will be tempting to the taste, pure and fresh, and he asks a slight advance over the prevailing price. This is his contention: "When buying food products, the average woman in town is more interested in better quality than lower prices. She may not admit this, but it's true! I believe that when people take anything from our farm they are getting better quality than a similar price would buy at the store. I do not turn all the middleman's profit over to the customer, but I put this saving into better quality and I get a little extra for the extra pains we take."

The man across the road undersells his neighbor. But his produce is of inferior quality. He has trouble marketing what he raises, whereas the first man cannot keep up with the demand. It is pretty plain which one makes the money. The quality man gets his customers back.

From my observation of many roadside selling arrangements—both successful and otherwise—certain conclusions have been reached. One is: Provide plenty of hard surfaced and level parking space, either right alongside the road or in plain sight of the road. A single driveway does not seem to fill the bill. H. Zimmerman, near Camp Custer, Battle Creek, Mich., has a broad graveled frontage of 300 feet, arranged so that it drains away from the road, making it easy to turn off the highway. That gives plenty of distance so that a man has time to slow down, drive in and park, after he sees the signs and notices the Rambler's Inn.

Zimmerman, his son and daughter give nearly all their attention to building up this roadside business. He says he plans to keep the little "Inn" open all winter. With the co-operation of a lumber firm making small "knock down" houses, he plans to establish a tourist camp on his property along the banks of the picturesque river.

Non-Producers a Detriment

There are two things in the swift spread of this roadside selling plan that I regret. The first is this: The man who is making the most cash from roadside selling is usually not the honest-to-goodness farmer. He is a man from town who saw the opportunity on the selling end, bought a little farm on the paved road, buys most of his stuff from real farmers or from the city and sets up a business where he dispenses gasoline with one hand while he hands out the 10 cent candy bars with the other. He is after the tourist business. Sometimes he "skins" his customers and that makes the row of the earnest farmer a little more difficult to hoe. They put you in the same class! One of these men, and he impressed me as honorable—but he was a city man and not a farmer—told me that he did not farm one of his acres and had no intention of so doing.

The other thing I regret is the tendency to slap up a little stand, tack up a mass of gaudy pop and ice cream signs and then let a child or an old person run the roadside stand. The roadside signs should sell what YOU produce. That is what people want. What the world needs is good food, not dope. Keep a little of the cooling stuff if the public demand it, but feature your own produce in your own way for permanent results. When the owner of the farm awakens to the fact that his frontage has a real advertising value that ought to be used for marketing his own produce at better prices, then he'll not be so free to tack glaring soft drink signs on every tree for a quarter mile in each direction.

Adopt a Farm Name

And here is a mighty commendable tendency I noted. Most successful roadside selling farmers give their farms a name. Van Brussel calls his place the "Riverview Farm." One man named his little fruit farm "Please-U-Place." A few weeks ago we drove past the "Cackle Ranch."

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Marketing of Washington Prunes

by W. A. Scott

THE WASHINGTON Growers' Packing Corp., of Vancouver, Wash., is composed of about 650 growers in Clark county, whose products are mostly prunes of the Italian variety. The association marketed about 7,750,000 pounds of prunes of the 1923 crop. It owns a three-story warehouse, 50 by 200 feet in size, which is equipped for grading, sterilizing and packing of prunes. This brief account of the methods of this association will serve to illustrate the principles involved.

How the Prunes Are Dried

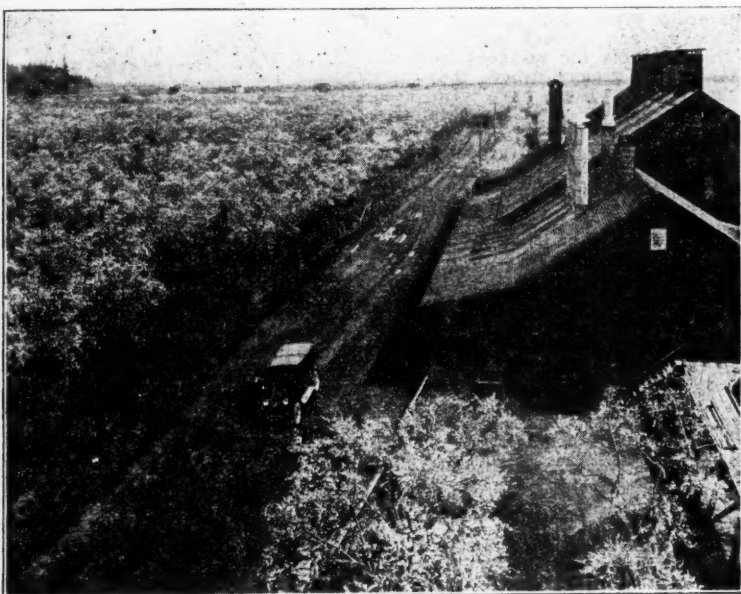
The prunes are dried on the premises of the growers with their own equipment before being delivered to the association's grading and packing plant. In most cases, the orchardist has his own dryer, though in a few cases two or more join in operating a plant large enough to handle their combined output. The dryers in this locality, as a rule, are equipped for using wood as fuel for the furnaces. However, there are three equipped with oil burners and three having heaters and electric-

are pressed into 25-pound boxes, lined with "glassine" paper.

The orchards of members represent nearly 4000 acres of fruit, mostly prune trees. The sentiment of the members of this organization is favorable to the proposed Northwest Prune Federation that is being formed by Oregon growers.

Co-operative Marketing a Success

In the operation of the Washington Growers' Packing Corp., co-operative marketing has been a success and the concern, if it joins the prune federation, will bring much valuable experience with it. Among growers of the Vancouver district, there is a feeling that there should be greater co-operation at the production end, in the form of community dryers, for instance, that would cost approximately \$10,000 each, in which the prune crop of 80 to 100 acres could be much more economically handled than by a number of much smaller dryers. It is estimated that the 1924 prune crop of this district will amount to only about 60 per cent of that of 1923, but the grade of this year's fruit will be



Prune orchard and dryer, near Vancouver, Wash

driven fans for circulating hot air through a dehydrating chamber.

In any event, the green prunes are first dipped in hot water containing a small per cent of lye, which has the effect of cracking the skins, then in cold water. They are then passed by a spreader onto trays, the latter being then placed in racks upon trucks and run through the drying tunnels, in which the prunes are exposed to 180 to 190 degrees Fahrenheit, for a period of 18 to 24 hours. Because prunes of small size are dried more quickly than those of the larger size, the drying is preceded by a two-size grading so that the large and small prunes may be dried separately. The dried products are delivered to the packing house in 100-pound sugar sacks.

The central packing and marketing concern began functioning in 1920, and up to this date has handled four crops, not including that of 1924. At its plant, each grower's prunes are graded separately on a vibrating grader that makes five grades by size. He is credited with the quantity of each grade delivered. Then his products go into the pools for the different grades, and all prunes of each grade are passed through the mechanical processor in which hot water and steam at 212 degrees Fahrenheit are applied for purposes of sterilizing. During and after this process, the fruit is not touched by hand. The prunes pass by gravity to the packing hopper, from which they

higher than that of the previous season.

Essentials in Successful Roadside Marketing

(Continued from page 12.)

The Red Apple Farm, Dixie Egg Farm, Art's Place and the Half-way Farm serve to give the business an identity all its own. A name gives the customer something to "take hold of" and remember you by. Be sure it is pleasantly appealing. Then, put the farm name on the barn, at the top of your booth (if you have one), on your signs, and have it printed on the packages in which you market whatever you raise. That is about the best and cheapest advertising you can do—to have a good name and to use it and protect it with only good quality goods that make every customer hanker to come back for more.

Blight Reduces Crops in Chile

BLIGHT practically destroyed this season's crop of olives and oranges in the Tacna region of Chile, according to the Department of Commerce. In 1923 over 500 quarter casks of olives were shipped to the United States from Chile, but because of the poor quality this season, none can be shipped abroad, the report states.



Try one Kelly Commercial Cord on your car or truck

So far as we know, there never has been built another pneumatic tire with the wearing qualities of the Kelly Commercial Cord.

First developed to meet the need for a dependable truck tire, it gave such amazing service that people who were using it demanded it in passenger sizes, too.

It is now made in sizes from 30 x 3½ to 40 x 8 and in every size you will find the extra strong sidewalls, the tough, massive tread and the reinforced shoulders that have placed the Commercial Cord in a class by itself.



Whether your driving is done over good roads or bad, if you want a sturdy rugged tire that will outwear any tire you have ever used, try one Kelly Commercial Cord on our recommendation.

Kelly-Springfield Tire Co.

250 West 57th St.

New York

- this

prevents this-

Niagara PARA is a wonder-worker at ridding orchards of tree borers. It is easy to apply. Trees are not injured. The cost of treatment is very small. So PARA far surpasses tedious, expensive worming.

Niagara PARA is pure Paradichlorobenzene, the chemical recommended by the U. S. Government and state experiment stations for killing peach tree borers. We also recommend it for wooly aphid of apple, pear and prune root aphid, and grape phylloxera.

Young trees should be PARA-treated

Experience indicates that trees as young as one year are not injured by applications of this chemical. The treatment with PARA, therefore, insures a virile, profit-yielding orchard.

Get Niagara PARA from your dealer or direct from us. It is guaranteed to be full strength Paradichlorobenzene, yet it is inexpensive. Directions for applying come with each package.

The U. S. Government has issued a new bulletin on the control of borers with Paradichlorobenzene. Write us for free copy of this bulletin, and our valuable PARA folder, giving your dealer's name.

Niagara Alkali Company
9 East 41st Street, New York City

BRAUN-KNECHT-HEIMANN-CO.
San Francisco, California

Selling Agents for
California, Washington and Oregon

New Engine Prices

19%

below 1913 level

Today!

"Z" Engine Prices

1½ h. p. Battery Equipt	\$48.50
3 h. p. Battery Equipt	\$83.50
3 h. p. Magneto Equipt	\$98.50
6 h. p. Magneto Equipt	\$153.50

\$58.50

1913 Engine Prices

1 h. p.	\$55	4 h. p.	\$130
2 h. p.	\$90	6 h. p.	\$200

YOU can buy a "Z" now at a price per horsepower that is 19% below the Fairbanks-Morse advertised engine prices of 1913. Quantity production, engineering skill and careful manufacture have all been combined to give a better engine at a lower price.

The "Z" today is the cheapest servant you can hire. More than 1,250,000 h. p. in farm use have proved the "Z" is the best engine that money can buy—dependable and economical in operation as well as low in first cost. The magneto-equipt "Z" operates on kerosene.

With the new reduction, the price is today 19% below 1913 level

FAIRBANKS, MORSE & CO.

Manufacturers Chicago

KITSELMAN FENCE

GET IT FROM THE FACTORY DIRECT

"I saved 26% a Rod," says J. E. Londry, Weedsport, N. Y. You, too, can save by buying direct at Lowest Factory Prices. WE PAY THE FREIGHT. Write today for Free 100-page Catalog of Farm, Poultry and Lawn Fence, Gates, Posts and Barbed Wire. KITSELMAN BROS. Dept. 303 MUNCIE, IND.

Saw Books FREE

"Pruning Saws", "Saws on the Farm", "Saw Sense"; Send your name and address and say which book you want—FREE. Write now!

E. C. ATKINS & CO., Inc.
Dept. D-1 Indianapolis, Indiana

Orchard Problems and Their Solution

Edited by Paul C. Stark

Apple Maggot

How is the apple maggot best controlled? I find it especially common on the summer varieties of apple and last year on the Northern Spies.—E. B. R., Connecticut.

THE APPLE maggot, or railroad worm, is the feeding worm of an insect which resembles a fly in many respects. The fly emerges from the ground in June or July, depending upon the season and locality, punctures the skin of the fruit, and lays eggs under the skin. The punctures are usually too small to be seen until the eggs hatch and the maggots start burrowing into the fruit.

The old and common method of controlling the apple maggot was to pick up and destroy all windfalls. This prevents the maggots from entering the ground, where they pass the winter. Hogs have also been used to eat up all of these infested fruits.

It has been noticed recently, however, that the flies are easily killed by the stomach poisons contained in the regular sprays. Such poisons are eaten by the flies, when the leaves are covered with drops of moisture. Arsenate of lead, if applied in the spray mixture at the rate of two and one-half or three pounds to 100 gallons of water, about the last of June or first of July, will hold the insect in check.

Bacterial Leaf Spot of Peach

What is the so-called Bacterial Shot-hole disease like and how can I tell it? I have a condition on my peach trees which I believe to be this disease.—E. K. S., Tennessee.

THE BACTERIAL Shot-hole or Leaf Spot of peach is usually identified by small dark spots on the foliage. The portion of these leaves which is affected often falls away in time, giving a characteristic shot-hole appearance. These infected leaves also turn yellow and fall off the tree, and when very serious, the leaf-fall may be rather severe.

As a general rule, wet, warm conditions favor the disease, so that sections of the country having wet seasons usually suffer the greatest damage, while in regions where dry summers are common, the disease is not usually very serious.

Bacterial Leaf Spot of peach cannot be controlled by spraying. However, the trouble can be eliminated to a great extent by orchard practices which will keep the trees in the best of health and vigor. In addition to cultivation, applications of some nitrogenous fertilizer, such as nitrate of soda or sulphate of ammonia, will be found very helpful in increasing the vigor of the trees.

Top Worked Trees

Is there a difference in the fruit if the graft is put on a good tree or if grafted on any tree found along the roadside? If one grafts Grimes Golden on Ben Davis is that what is called "a double-worked tree"?—S. K., Indiana.

IT MAKES no difference whether a particular variety of fruit is grafted on another variety or if grafted on a common roadside tree. The variety represented by the scion will still remain the same and will produce the same kind of fruit. Of course there will be some difference in the way the grafts grow, as naturally they obtain all their food supply from the tree on which they are

grafted and their growth thus depends upon the vigor and thriftiness of this stock.

When any variety is grafted on another variety it is called a double-worked or top-worked tree. However, the term, "double-worked tree" is usually applied to one which has been double-worked in the nursery, so that what remains of the first variety is only the portion of the trunk between the graft just beneath the surface of the ground and the point above the ground where the second variety is added.

Cover Crop for Grapes

What would make the best cover crop for a vineyard? The soil is a sandy loam with a fair amount of humus. I want to plant a cover crop, however, which will furnish me with a good green manure crop to plow under.—E. K. M., Pennsylvania.

NEARLY all of the clovers have made very satisfactory cover crops for vineyards and have done well in Pennsylvania. A few varieties of clover, however, make a slow start in the spring and may, during unfavorable seasons, make a rather short crop to turn under. The crop selected should be one which will give good growth in your locality.

Hubam Clover is probably as good a green manure crop as can be produced in one year. It may be planted as late as August first and still produce an abundant growth before frost. It may then be plowed under about the first or middle of May the following spring.

The Orange Juice Flows

IF you have been in any of the larger cities this season, you have no doubt seen the new fruit juice extractors. The operator moves a lever, an orange or a lemon is released from the reservoir, it rolls down the chute into the extractor, and, presto change, out comes the juice. Your orangeade or lemonade is made "while you wait," and you can see the orange or lemon from which it is made.

These ingenious machines have been made and distributed by the California Fruit Growers' Exchange in order to promote the consumption of more fruit juices. About 20,000 of them will be in use by the end of the season. It is estimated that they will use 2500 cars of fruit. At 10 cents per drink, this means \$20,000,000 a year to the Exchange members.

Such ideas as this could very readily be extended to the apple industry of the country if the apple growers were as well organized as the citrus growers. However, the fact that apples are produced over such a wide territory, and that there is so much rivalry between sections, seem to be serious obstacles to co-operation between sections which will insure the greatest good to the industry as a whole.

Excessive Storage Facilities in Chicago

IT IS reported that 10,000,000 cubic feet of cold storage warehouse space have been discontinued the past year in Chicago due to the lack of profit in the business. The claim is made that several of the best plants in the Chicago district were filled to the doors the past year but failed to make a profit because of the low storage charges.

Financing Fruit Co-operatives

(Continued from page 11.)

scribed above may rediscount its paper with the intermediate credit banks, although such banks do not make direct loans to associations of producers of perishable products.

A second way by which co-operative associations may obtain financial aid from this source is through the formation of agricultural credit corporations under the laws of the state in which the co-operative is organized. Such credit corporations have the privilege of rediscounting their paper with the intermediate credit banks.

The details that must be observed in these matters can be secured by addressing the Federal Farm Loan Board at Washington.

Other Sources of Credit.—Three other sources of necessary funds deserve mention because of the fact that in the aggregate they are large and because at least one of them, namely, the acceptance method, is not used at present to the extent that it deserves to be used.

1. **By acceptances.** This method of financing is especially useful where the purchase of supplies is involved. Millions of dollars are required annually for boxes, barrels, fertilizers, spray materials, paper and similar supplies.

The seller of the commodity to the association draws the acceptance and at the time of shipment forwards the acceptance to the purchaser. The latter writes the word "accepted," the date and place of payment across the face of the acceptance, signs the association's name, and returns it to the seller or to the bank through which it was presented. If the acceptance was presented through a bank, it is fairly safe to assume that the manufacturer or other seller of the supplies in question is using the acceptances as a basis for his credit at that bank. In other words, the seller may either negotiate the acceptance or he may hold it in his own strong box until maturity. The acceptor—in this case the association—either pays it at maturity or secures an extension of time.

The best use of acceptances requires that they be not in themselves renewed but that they be treated as a past due obligation whose extension is covered by a promissory note. The acceptance method is available for all classes of purchases on which payment is deferred. It is far to be preferred over open-account transactions for both the buyer and the seller.

An association planning to use this method of deferring its obligations must of course make the use of the acceptance method a condition at the time the arrangement to purchase the supplies is made. Banks, other things being equal, are more willing to extend credit on acceptances than on ordinary notes. This is due to the fact that both the buyer and the seller of the merchandise in this case become obligated to the bank for the payment of its loan.

2. **By drafts against shipments.** By arrangement with their banks, a great many co-operative associations are enabled to deposit their draft against the distant purchaser of the fruit marketed by the association as cash when attached to shipping documents, or even without such documents.

This arrangement may be at the face of the draft or at some amount less than its face, usually with interest from the date of crediting the draft at an agreed rate. In the aggregate, large sums of money are thus made immediately available to growers without the necessity of emitting notes or other evidences of indebtedness.

3. **Through shippers' proceeds.** The common fund arising from the sale of the products of all of the members necessarily reposes in the bank to the credit of the association over a varying period of time. This fund is utilized for all necessary payments. The growers thus provide themselves with a revolving fund of great utility. Private marketing agencies utilize this fund in similar fashion.

What Will the Banker Consider When the Association Requests a Loan?

It is hoped that the foregoing discussion will suggest to fruit associations sources of credit which they can call upon in the progress of their work and development. It is not out of place to comment very briefly on a few of the characteristics of co-operative marketing associations that banks and other money-owning enterprises will take into account in determining the amount of credit to be extended and the readiness with which it will be made available.

Many banks borrow from other banks and financial institutions. Therefore the moral responsibility of borrowers and their financial ability to repay their debts must always be borne in mind. Some institutions sell commercial paper. The notes of co-operative associations are in the background of the picture of some of this paper. Hence, banks will probably consider to some extent all of the following factors in making loans:

1. The age of the co-operative and its success in the marketing of products.
2. If the co-operative has been a borrower in the past, its reputation for taking up loans on their due date.
3. The character of the product handled, that is to say the degree of perishability and its susceptibility to common or cold storage, thus affording a physical security for loans.
4. The reputation and character of the members of the association viewed as a whole.
5. The efficiency of the organization from the standpoint of personnel and management, particularly as to the character of its board of directors.
6. The policy of the organization as to extension of credit to members; as to the purchase of supplies; as to the businesslikeness and economy of its methods of handling the particular crop it markets.
7. Its policy regarding the aggregate amount of loans outstanding at any time; the building up of cash surpluses; whether or not it holds adequate cash or commodity collateral for its current operating purposes.
8. The sales and holding policies of the association as to its products.
9. The extent to which products are paid for from proceeds of sales of products and from proceeds of loans.
10. The frankness and fullness with which the responsible operating officers of the co-operative keep their banker informed as to their status in all respects and the freedom with which they consult him in reaching wise solutions of their financial problems.
11. The nature of the contract, if any, that binds the grower to his association, thus tending to assure volume of business and control of product.

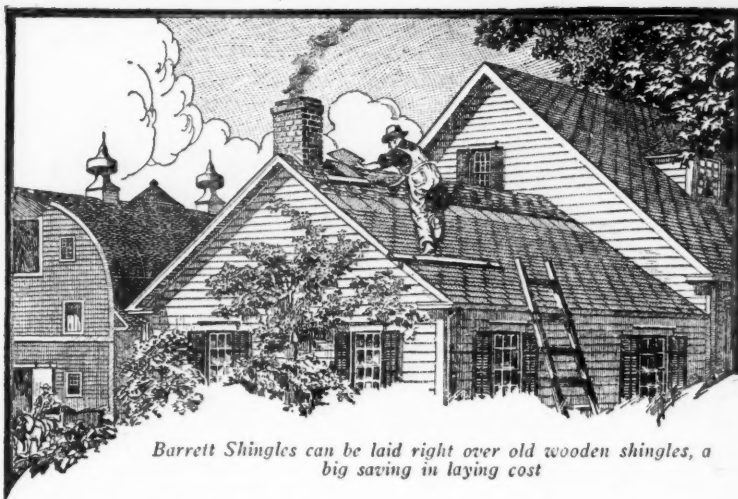
Conclusion

With the growing importance of the co-operative method of handling agricultural business, it is essential that associations adopt generally the policy of creating adequate reserves; that they borrow cautiously; and that they provide themselves with expert personnel, one of the most important factors in determining the banker's willingness to make loans.

Associations handling perishables necessarily are confronted with financing problems different in character and somewhat more difficult to meet than those of staple commodity associations.

The newspapers a few weeks ago carried information concerning a revolving loan fund created by a group of New York bankers for one of the large cotton associations. The amount of the fund was mentioned as \$20,000,000. Whether or not this is the exact amount is not important. What is important is that banks now have reached the point where co-operatives that meet the necessary requirements for extension of credit can secure it in almost unlimited amounts. The responsibility of preserving this situation and improving it rests upon the co-operatives themselves.

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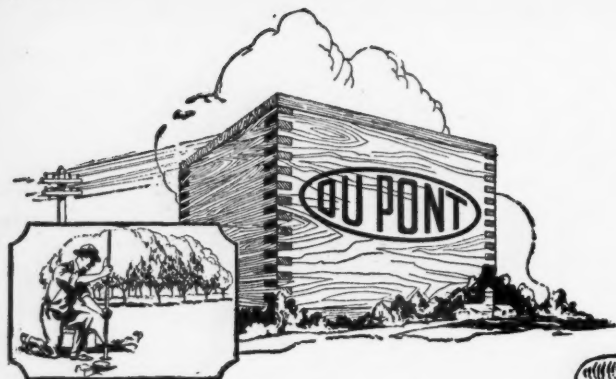
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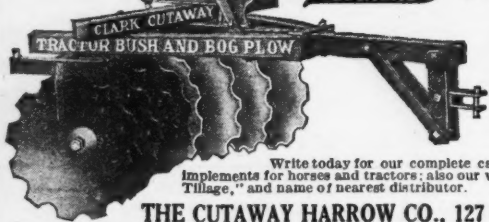
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not only saves time and money but also gives better results. Many fruit growers use it for cutting up sod or a cover crop between the trees, or for deep cultivation. The Bush & Bog Plow is built in sizes for two or four horses or tractor. Order yours now for use this Fall.

Write today for our complete catalog of orchard and general tillage implements for horses and tractors; also our valuable free book, "The Soil and Its Tillage," and name of nearest distributor.

THE CUTAWAY HARROW CO., 127 Main St., Higganum, Conn.

An Ideal Combination

Fruit Poultry Bees	{	American Fruit Grower . . . 1 yr.	All Three for \$1.60
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American Fruit Grower, 53 W. Jackson Blvd., Chicago, Ill.



Successes and Failures in Co-Operation

by C. E. Bassett

MANY years of observations of co-operative marketing organizations in almost every state in the Union have led me to believe that some of the most outstanding successes and failures have been the result of a chain of favorable or unfavorable circumstances. An association hastily thrown together has often outlived another group of growers that were bound together under the most approved plans of the ablest leaders. Necessity seems to have been the best foster mother of a successful effort at team work in marketing. If an organization is formed following several bad marketing years, and the first few years thereafter the markets steady and conditions improve, the growers are inclined to give to the new organization too much of the credit and are willing to stand for many methods to strengthen their exchange. But let an organization be formed, no matter how strong or how sound, and let the succeeding years show a decline in marketing conditions and that set of members will be inclined to think that co-operative marketing is a nice dream but a bum practice. Of course this is due to an improper analysis of the situation, but it is a fact, nevertheless, and we have to work with facts.

However, there are certain essentials that should be observed in this work of trying to get real team work, and the human element must always be reckoned with.

It must always be kept in mind that control of the organization must be kept in the hands of the producer members, and that their investment is their crops that receive the benefits of the marketing facilities of the organization. Money invested is only an incident to the needs of the concern and is paid interest, the same as rent is paid for buildings, wages to employees, etc. Always organize around a single commodity or a group of products that can use the same packing and marketing equipment and that will not conflict with each other. The volume must be sufficient to give an efficient and economical operation. There should be a clear, definite and binding contract with each grower member for a length of time that will give the exchange stability for purposes of finance, and to give the plan a fair test. No business can be built up in one season. The manager must not only be experienced, honest and competent, but he must have that rare qualification of being able to secure and hold the confidence and respect of the members. This does not mean that he must be a "good mixer," but he must be a natural co-operator—one whom others can work with. His system of accounting should be so thorough that at any time he should be able to meet a "doubting Thomas" with facts and figures that will explain every transaction. Frequent audits may be expensive, but they are the best investment, for they not only avoid mistakes, but they inspire confidence—the most essential condition in the life of an organization. Frequent meetings of the membership are essential, that improvements may be adopted and the members kept fully alive to every detail. It is their business, and they do not want a boss but a competent servant. The management members feel that the management has passed out of their hands, they become kickers and quitters, rather than boosters. The financial policy should be to build up sufficient reserve funds that times of stress may be met. Do not try to run a business on sentiment or hot air.

ment members feel that the management has passed out of their hands, they become kickers and quitters, rather than boosters. The financial policy should be to build up sufficient reserve funds that times of stress may be met. Do not try to run a business on sentiment or hot air.

TWENTY farmers of Gloucester county, N. J., have formed the Farmers' Fruit and Produce Co., Inc., and will operate their own commission house in their nearby city, Philadelphia. They will start with \$6000 capital stock, which has been subscribed. Fruits and vegetables will be their line and they will also buy their packages together. This plan of the growers owning and managing their own commission house is not new and many failures have been noted in the past. But this deal is nearer at home and may succeed, which is our hope.

THE MICHIGAN Fruit Growers, Inc., with headquarters at Benton Harbor, shipped 1320 cars of fruit last season, grapes and apples being the leaders. The federation has 25 shipping associations. Earnings from selling fees were \$15,400 and expenses were \$14,100, which included \$8600 for salaries, \$806 for directors' expenses, \$737 for telephone and telegraph, \$731 for advertising, and \$600 for stationery. Outstanding capital stock amounts to \$12,000. The balance on hand from the year's business was \$1375.

THE CALIFORNIA Peach and Fig Growers' Ass'n, of Fresno, has over \$2,400,000 in capital investments, dividends and surplus. The operating departments have been reorganized to save \$100,000 annually in expenses. The general manager has suggested changes: (1) That grading be discontinued at receiving stations, as most fruit has to be regraded at packing plants; (2) that fruit be received at fewer points; (3) that storage facilities be provided, to prevent heavy losses in quality; (4) that the advertising be given to farm papers and other periodicals reaching the consumers of the products, rather than to expensive national magazines.

GROWERS, shippers and inspection forces of the Wenatchee, Wash., district seem to have united to secure uniform inspection for apples, both when received and when shipped, with one standard pack and grade and one authoritative head. Last season over 9000 cars or about one-half, of the apple crop of that district went out under federal inspection and a greater percentage of the 1924 crop will no doubt be handled in that manner.

FOR YEARS Florida has suffered from the too early shipment of citrus fruit—oranges and grapefruit that were green and unpalatable—which ruined the market. The leading growers and shippers now propose the federal inspection of all early citrus shipments and the issuance by federal inspectors of certificate of maturity. In other words, federal inspectors will certify that the oranges and grapefruit satisfac-

torily pass the acid tests prescribed by state laws in both Florida and California, namely, in the ratio of eight to one for oranges and seven to one for grapefruit. Previously there has been state inspection maintained by the Florida State Department of Agriculture. However, the number of inspectors employed has been inadequate. It has been impossible for them to inspect all the fruit going out, consequently the inspection has not amounted to much. Also it was not customary for the state inspectors to issue certificates of maturity which the trade could demand as evidence of satisfactory quality.

THE CALIFORNIA Fruit Exchange of Sacramento has just launched an experiment-1 consumer advertising campaign in a dozen markets in the mid-west. This move is the result of extensive development along the lines of standardization, which has been the exchange's aim for several years.

Lack of standardization has been one of the chief drawbacks to advertising California deciduous fruits, and while the system of control is not yet perfect, the exchange has gone a long way toward solving many of the problems incident to giving the consumer sound and well matured fruit. Extensive experiments have been conducted under the direction of this new department, especially with a view to determining the carrying qualities of fruits in various stages of maturity. These tests, conducted with the precision of laboratory experiments, have confirmed exchange authorities in the knowledge that maturer fruits carry better than do greener ones.

IF THE 5800 farmers' business organizations handling grain, dairy products, fruits and vegetables, and livestock, which have reported year of formation to the United States Department of Agriculture can be considered representative of the 12,000 existing associations, then it is possible to point out a few significant facts regarding the development of agricultural co-operation in the United States. The figure 5800 includes only associations now active. When the data for the associations which have gone out of business are compiled and combined with the figures telling the story of the living associations, it may be that somewhat different conclusions will be drawn than those suggested by the percentages derived from the data now at hand.

As regards year of formation, the 5800 associations can be roughly divided into four groups: Those organized during the 20 years, 1882-1901; those organized during the 10 years, 1902-1911; those organized during the next 10 years, 1912-1921; and those organized since 1921. The first group comprises 8.6 per cent of the total number; the second group, 20.3 per cent; the third, 65.3 per cent; and the last, 5.8 per cent.

The years of most rapid expansion in number of associations were 1905, 1908, 1912, 1914 and 1919. National elections were held in 1908 and 1912; the world war began in 1914; and 1919 was the year immediately following the close of the war.

The years of retarded expansion were 1899, 1907, 1913, 1917, and the years since 1919.

Nearly one-half of the 5800 associations studied were engaged in the marketing of grain; about 20 per cent were creameries; about 13 per cent livestock shipping associations; about 11 per cent, fruit and vegetable organizations, and about six per cent, cheese factories.

There are several ups and downs in the figures indicating the number of fruit and vegetable marketing associations formed in the different years. For instance, 1901 has credited to it a greater number of associations than any preceding year or any succeeding year until 1908. In 1917 fewer organizations were formed than in any preceding year or succeeding year for five years. The most important year from the stand-

point of the fruit and vegetable associations was 1921, when 16.7 per cent of the fruit and vegetable associations included in the present study were launched. It was not until 1923 that the idea of the centralized association operating over an entire producing region obtained a foothold in the territory to the east of the Rocky Mountains. Prior to that year, the accepted plan for fruit and vegetable associations had been to form local associations and to federate them for selling purposes. That plan is still the approved method in many sections.

One organizer of fruit and vegetable associations has said that the producers are more prone to organize in times of distress than in times of prosperity. The great increase in the number of such associations formed in 1920, as compared with the preceding years, would seem to lend some color to the theory, for it was in that year that the price level for farm products sank considerably below the levels prevailing during the period of the world war.

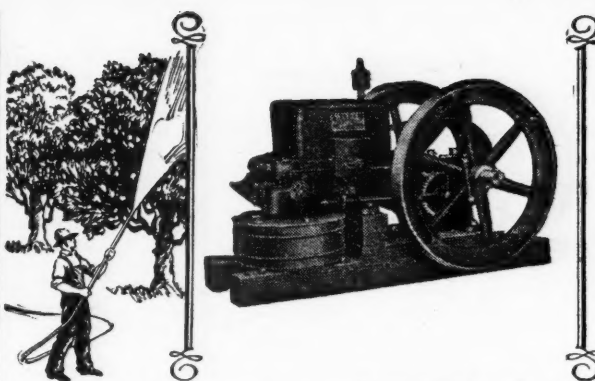
THE CALIFORNIA Imperial Valley Vineyards, Inc., has been organized with general offices at Calipatria, Calif. The purpose of this company is to raise early grapes on a large scale and to this end has acquired some 3000 acres of grape land, which will be set to grapes.

R. S. McBride, well known valley man, is at the head of the movement. Associated with him are several well known men as stockholders in the company. C. R. Prince was elected president of the company at a recent meeting of the stockholders; R. S. McBride, vice president and general manager, and Harry Tschepp, California city engineer, secretary and engineer.

THE MARTINSBURG (W. Va.) Fruit Exchange is operating for its tenth season this year. It has over 100 loyal members, many of whom joined at the start. In 1923, the association handled over 600 cars of apples and peaches and obtained better prices for its members than most independent growers received. The association has had five different managers, but notwithstanding the difficulties along this line, it has had a highly successful experience. The association owns its own warehouse and office and has a large sign overlooking the B. & O. Railroad.

"AN INCREASE of over 150 per cent in membership since the close of last season," and "more acreage than we even hoped for at the beginning of the campaign," are two results reported at the close, on May 20, of the membership campaign of the Sowega Melon Growers' Ass'n, Adel, Ga. It was found that the total number of members on that date was 2050, and the contracts covered from 22,000 to 24,000 acres. The crop will be sold through the Federated Fruit and Vegetable Growers, Inc., and careful plans are being made for wide distribution. In order that the district managers of the Federated might have a better understanding of the situation in regard to Georgia watermelons, a special conference was held recently in Pittsburgh and the secretary and the sales manager of the melon association outlined the plans and the needs of the association for marketing this year's crop. Every phase of operation from planting the seeds to loading the melons on the car was discussed in order that the salesmen might appreciate the efforts made to produce quality melons. The salesmen were unanimous in declaring "they knew more about Sowegas than they ever dreamed of knowing," and appeared enthusiastic about placing them in good markets at satisfactory prices.

THE LOUISIANA Farm Bureau Strawberry Growers' Exchange, of Baton Rouge, sold 245 cars of berries this season at an average selling price of \$2.05 per crate, the total receipts being \$507,149.



HUGE INSECT COST!

"Bugs cost the American Farmer 2 billion dollars a year—in two years the loss would equal France's total debt to the United States. The fruit-raiser pays a huge portion of this tax. From an interview with Dr. L. O. Howard, Chief Entomologist for the U. S. Government, as reported by Herbert Corey."

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Surplus-powered, speedy—the WITTE gives you a steady air pressure with never a chance of a breakdown. Uses all cheapest fuels—kerosene, gasoline, distillate or gas. Simple to operate, easy to start, runs perfectly on the uneven keel of wagon bed, truck or uneven ground.

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WITTE ENGINES

Rain Handicaps New York Summer Meeting

by J. D. Luckett

IN SPITE of a decidedly rainy day, some 600 fruit growers assembled at the Locust Hill fruit farm of Charles S. Wilson and Bruce P. Jones near Hall, N. Y., for the summer meeting of the New York State Horticultural Society on Wednesday, July 30. Plans had been made for an outdoor session and demonstrations of spraying and dusting operations and tours of inspection of experimental work under way on the Wilson and Jones farm.

Rain drove the crowd into one of the local churches, where a brief business session was held and where talks by Dr. Livingston Farrand, president of Cornell University, and Dean A. R. Mann, of the College of Agriculture at Ithaca, were heard. Dr. U. P. Hedrick, horticulturist and vice-director of the Geneva Experiment Station, also spoke briefly of the horticultural work in progress at the Experiment Station, while Prof. P. J. Parrott, entomologist at Geneva, told something of the experiments under way in the Wilson and Jones orchards on the control of rosy aphids, scab and redbug by dusts and sprays.

Dr. Farrand made a plea for a wider viewpoint and more sympathetic consideration of the interests of others on the part of agriculturalists. The tendency today, he said, was for every group and every individual to magnify his own interests and troubles to the exclusion of everything else. Not only is this true among farmers, but it is equally true among lawyers, bankers, doctors or any other group, with the result that America as a nation, and the world at large, is losing a breadth of view that will make democracy worth while, he declared. As one step to offset this trend, Dr. Farrand referred to the new work to be taken

up by Dean Mann for the International Educational Board to promote an international exchange of information and experience in agricultural matters.

Dean Mann explained the nature of the new undertaking which will occupy his time after the first of August, when a leave of absence granted by the trustees of Cornell University for two years will take effect. Most of this time, it was explained, Dean Mann would spend abroad seeking those things in European agriculture that might be of benefit to America, while he will take to Europe the best that America has to offer in the way of agricultural advancement.

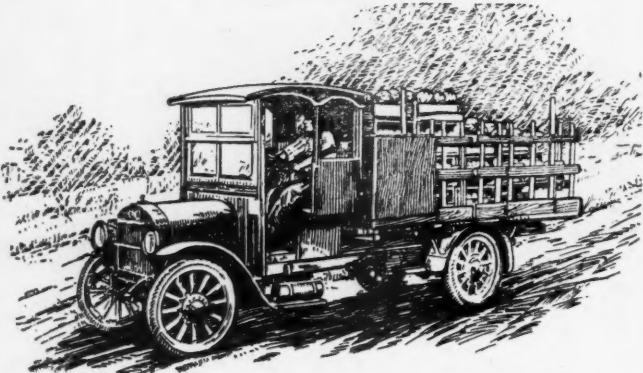
In the afternoon the weather cleared sufficiently for the growers to make tours of inspection through the orchards to observe the spraying and dusting experiments made by the station and pruning tests conducted by the college. Several commercial houses also demonstrated new types of dusting and spraying apparatus to the edification of an interested crowd.

In the orchards, the marked control of scab and rosy aphids by both spray and dust as compared with untreated trees attracted especial attention. Weather conditions in western New York this season have aggravated scab infection to the point where this disease has become a really serious problem for many growers.

Another feature which attracted much interest among a large group of the horticulturists present was the local packing plant of the Western New York Co-operative Packing Ass'n. This plant is reputed to be the best equipped plant in the association, with many novel devices for handling the fruit expeditiously.

Favorable action was taken by the Horticultural Society on a proposal to request aid of the Federal authorities for a study by the State Experiment Station of peach yellows and little peach.

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When fruit is ready for the market you need a truck that will keep going long hours every day—without tinkering.

Any truck may do, perhaps, when there isn't much to be done. But when the work is heavy you'll be glad you own a GMC.

You will find a GMC as trustworthy as the day is long. Surplus strength in every part. Years of the finest kind of truck building behind its dependable design.

You will find GMC lower in price than other high grade trucks. Participation in the vast purchasing resources of the General Motors Corporation cuts production costs to the very bone.

Put it squarely up to a GMC to take charge of your hauling and cut the cost of doing it. You will be glad you did, at least 365 times a year. Ask for a catalog.

GENERAL MOTORS TRUCK COMPANY
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GMC Trucks are "Seven Steps Ahead"

MYERS
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FIG. 1823
WATER SYSTEMS
SELF-OILING

A MYERS Water System is far more than a modern convenience. It's a necessity and a big profit-maker too. Cows, hogs and poultry all yield a bigger income when fresh, running water is available.

Myers Water Systems modernize the farm. They save work for everybody. They relieve the father, make the mother happier and the children more contented. Absolutely the best investment you can make!

We manufacture a complete line of simple and dependable Water Systems. They are self-oiling, quiet, clean and safe. Your Myers dealer will help you choose exactly the system you need. See him or write us for catalog.

FIG. 1990
MYERS DIRECT WATER SYSTEM FOR SHALLOW WELLS OR CISTERNS

FIG. 1980
MYERS DIRECT WATER SYSTEM FOR DEEP WELLS

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Pumps, Water Systems, Hay Tools, Deer Hangers

HALL'S
NICOTINE SULPHATE

Kills
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[plant-lice]

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A REMARKABLE OFFER
Club No. 15

Farm & Home	1 yr.	All Three for \$1.00
"O. K." Poultry Journal	1 yr.	
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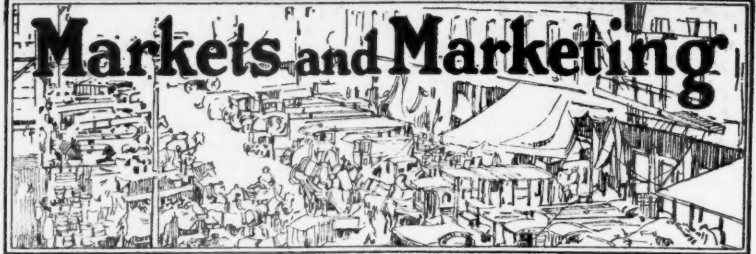
A Dollar Bill Will Do—We Take The Risk

American Fruit Grower Magazine
53 W. Jackson Blvd., Chicago

HEAT Without Coal!

Amazing invention does away with coal or wood. The Instant-Gas Oil Burner sets in firebox of any stove or furnace; burns 96% air and 4% oil. Gives three times the heat of coal, and cheaper. Better cooking and baking. Installed in few minutes; no damage to stove or furnace. Sold on money-back guarantee. Write today for 30-day free trial offer and Free Book, "Scientific Oil Burning." AGENTS: We pay \$600 a week. Write for free sample offer. Mention whether for stove or furnace.

INTERNATIONAL HEATING COMPANY
Dept. 62-Y, 117 South 14th St., St. Louis, Mo



Several "Niggers in the Woodpile"

by C. E. Bassett

THE RAIN has driven my pickers out of the currant patch and I have time to look over the market situation and try to figure out where the grower is "at." With packages over twice as much as they used to be, transportation double, and labor double, it is hard to figure out a very rosy future, with the market slow at one-half our old prices.

I had business in Chicago recently and took the time to look into this currant market situation. South Water Street had been returning sales at \$1.25 per 16-quart case. The case costs 28 cents, picking 50 cents, transportation 18 cents, cartage four cents, and commission 12½ cents, which left for the grower 12½ cents for the "fun of doing business," to say nothing about the cost of producing the fruit and superintending the job of packing and shipping. Of course you growers know that is not a new story, as many of you are getting used to such exciting experiences.

Being of an inquisitive nature, I wandered out to the retail parts of the city and found these same currants offered to the consumer at 20 cents per quart—\$3.20 for a 16-quart case that had cost \$1.25 that morning. A little careful questioning of dealers brought the same general reply. They readily admitted that a gross profit of \$1.95 on a \$1.25 purchase was "rather high," but they made much of the fact that their loss from decay was very great and that on that account they really did not make much on the fruit deal. When asked if they thought they would have this decay if they started their retail prices at a reasonable figure and thus encouraged the consumer to buy freely and in quantity, they looked rather wild and were somewhat doubtful.

The above kind of an experience can be duplicated every day in the year, in every city and town, and with practically every kind of fruit. About the only exception is in the case of oranges. The large orange associations have realized that it was the growers' job to "go all the way to market" and a part of that job is to educate the retail merchant just how to sell their fruit. This work means to send out trained men to show how to trim a store window, so as to attract the consumer to the fruit; other men to drill into the mind of the dealer that a "nimble nickel" is more profitable than a "slow dime" and that, by making their rate of profit low, they will move a much larger quantity and so gain a larger profit. Thus everyone concerned is a winner—more fruit is sold and that does away with "gluts," creating a steady demand and a good price, to the benefit of the grower. The consumer gets more good fruit in a fresh condition at a much lower price and the dealer increases his profit.

Fruit dealers are probably as bright as the average merchant, but they certainly need a lot of training along this line. A few years ago, when we were facing a very lean peach crop, interested parties united in poster and newspaper advertising, urging the consumers to "buy by the bushel" as the fruit was fine and would be sold at reasonable prices. Dealers were asked to keep their per cent of profit low, and the writer found some interesting results of this experiment.

In the city of Concord, N. H., one dealer in one day sold 64 bushels by the bushel. They cost him \$2.50 laid down and he sold them at \$3.50 per basket—a gross profit of 40 per cent. When I talked with him that evening he was inclined to think that the effort had not been worth while. I asked him what his trade would have been that day under his old way of doing business, and he said that he would have sold about 10 bushels on which he would have doubled his money—would have made \$25. When I suggested that under the new plan he had really made \$64, he looked rather dazed, but finally blurted out, "Yes, but see how hard I worked." It is hardly necessary to say that this fellow was not American born. This class does not seem to understand that the reason they have rotten fruit to throw under the counter is because their prices are too high to attract trade. They only lower prices when the fruit has passed to a state where it is almost unfit for food, and then it is too late.

Where the Consumer is at Fault

But the consumer is not blameless in this economic blunder. He pays very little attention to the time when fruit is in greatest supply, and hence cheapest, and so fails to do his canning or eating at the proper time. Most of the city daily papers give market reports as to supply and demand each day, and, as nearly every family now has a car of some kind, fruit in original packages can be bought at wholesale, getting it fresher and cheaper, to the great benefit of all concerned. But instead, the consumer uses the phone freely to order a supply for one meal, delivered at any hour of the day, with credit extended. If the consumers who now spend so much time in bewailing the "high cost of living," would spend a little of that time in waiting on themselves, in visiting the wholesale markets, in buying in quantity, in not being ashamed to carry their purchases home, in arranging to pay cash for everything, there would be less complaint and more comfort. Have we forgotten that the fiddler must be paid by those who would dance? If we demand service, why complain about the cost? The most expensive thing in this world is ignorance, and few of us escape the bill, no matter how "intelligent" we are.

Coming back to the currant deal, mentioned at the opening, the consumers did not know that the season was on and so there was no demand and wholesale prices ran low, to the loss of all. Now, when the crop is about all harvested, the price is higher—twice as high as at first. The writer has seen this condition every year for the last 30 years and so waits just as long as possible to begin the harvest, even though some of the crop is thereby lost.

It is the Growers' Job

We growers have thought, for all these years, that our job was to grow the fruit and send it somewhere for some stranger to distribute. When we have done that we have felt that our job was completed. In spite of all the pains and aches of our experiences, we "pass the buck" to the other fellow and then find fault if things don't come out to our satisfaction. Real business men don't let

their matters go that way. They know that they must take an active interest in the sale of their products all of the way. If the consumer cannot get their goods in fine condition and at a fair price, they know that a slow demand and low prices will make them the greatest sufferers in the deal.

We growers must not only grow what the consumer wants, rather than what we like to grow, but we must grade and pack it in the most acceptable packages, according to state and national standards. We must not only sell it to reliable dealers, but we must help him devise ways and methods to attract the consumers to want these products. And right there we must learn the value of intelligent advertising of farm products. It no longer is an experiment, for "Sunkist," "Skookum," "Sealsweet," "Niagara," and various other brand names have a nationwide significance to all. Skilled salesmen must be enlisted to teach the trade how to encourage the sale of our goods. A grower who has invested his all in a fruit farm can well afford to invest a few cents per barrel or box in any good system that will make his first investment a winner rather than a disappointment.

The Individual Grower Is Helpless

In all of these plans for improvement, the small tonnage of the average grower makes him helpless, working by himself. These betterments will only come when we lay aside our little childish selfishness and ignorance and join in local units, later to be federated into a great commodity organization that will have the brains and the money to make fruit growing a real business rather than a "job."

FACTS and figures taken from the annual report of the general manager of the California Walnut Growers' Ass'n, Los Angeles, Calif., for the crop season of 1923, give an indication of the present status of this producers' marketing organization. Two hundred new members, with 2800 acres producing 1000 tons of walnuts, were added to the membership list. A total of 39,753,800 pounds of unshelled walnuts were handled, as against 40,111,800 pounds of the 1922 crop, and 20,087,400 pounds of the 1917 crop. Of the total California crop of walnuts, the association handled 81.5 per cent for the season of 1923, compared with 80.2 per cent of the 1922 crop. In the opinion of the general manager, the association will handle 84 per cent of the 1924 crop. The quality of the nuts of the 1923 crop is indicated by the fact that but 6.5 per cent were graded as culls, while 14.2 per cent of the 1922 crop were so graded.

It is pointed out in the report that if the price levels for "all commodities" and for walnuts for 1912, the year in which the association was formed, be considered as 100, then the present price level for all commodities is 146, and the price level for walnuts is 170, and the purchasing power of walnuts is 16 per cent greater than in 1912. Furthermore, the quantity of walnuts marketed is nearly four times as great as in 1912.

On delivery of walnuts to the local receiving plants, growers were given an advance of 80 per cent of the selling price. The nuts were handled in two pools. The first was closed on November 20 and final checks mailed out November 28; final payment of the second pool, which contained but 2937 bags of odd lots, was made March 28. Regarding these settlements the general manager comments as follows:

"For the first season in its history, the association was able to accomplish these prompt payments to growers without borrowing money. At no time since the season opened was it necessary to make any bank loans other than the regular discounting of drafts against shipping documents. We are not only clear of debt at this time, but our operating reserve is sufficient to carry us into

the 1924 harvesting season without resorting to borrowed funds."

A deduction of but five and one-half per cent of the gross operating price was made by the association. Of this one per cent was to cover trade discounts, one and one-half per cent was for brokerage, two per cent for advertising, and one per cent for general expense.

FOURTEEN hundred sixty-four cars of fruit were handled the past season by the Western New York Fruit Growers' Co-operative Packing Ass'n, Inc., Rochester, N. Y. Of these 91 per cent were sold f. o. b. in 163 markets in 25 states, in Canada and Great Britain. The number of cars handled was 40 per cent greater than in 1922, while the expenses were \$5000 less. With a heavy crop and a gradual decline in prices, sales were hard to make. Twenty-eight meetings of the board of directors were necessary to consider the problems which arose.

The association begins operations this year with 143 new members and four new locals; a five-year contract has been adopted, and a new warehousing corporation formed. Fewer grades are recommended for this year, better packing, and more prompt delivery of fruit to the packing houses.

REVISED specifications and prices covering the sale of pears to canners, have been prepared by the California Pear Growers' Ass'n, San Francisco, Calif. Under the new specifications, the price of pears two and three-eighths inches or larger will be advanced \$5 per ton, or to \$57.50, and the price of pears between two and one-fourth and two and three-eighths will be reduced \$5, or to \$47.50 per ton. Prices on No. 2 pears will remain unchanged. The result of the changes will be to give a premium for size and quality. It is stated that the eastern markets prefer pears two and one-fourth to two and three-eighths, and they usually bring higher prices than the larger sizes, and some growers may prefer to ship the smaller sizes east and sell the larger sizes to the canners at the increased price.

A new trademark has been prepared, bearing the name of the association in the border and in the center an outline of a pear on which is inscribed "This grower is one of 1400 orchardists who believe in quality, careful packing and advertising." These labels are printed in blue and yellow and will be used as stickers on boxes.

LOCAL shipping associations soon find that their operations are too small to make much of an impression on the market. They also find their own association in competition with numerous other growers' exchanges and the natural conclusion is that a "federation" of associations is the most efficient plan. And so it is, but the lack of any definite standard of grade and pack causes much trouble. Each packing house manager has his own "yard stick"—his own standard. The result is dire confusion when any man or set of men try to sell the "federated pack" on an f. o. b. basis. Various states have tried this federation plan, with the above result.

Michigan tried it and made a mess of it, but has learned its lesson. The Michigan Fruit Growers, Inc., have not only established a "yard stick" but they have employed Alden M. Barron of Fennville and he will have charge of all packing house methods, acting as referee in deciding all matters of method, grade and pack. Mr. Barron has been the efficient manager of the Fennville Fruit Exchange and will bring to this work a wealth of successful experience.

Happy Henry—"I sure enjoyed my dinner this noon!"

Absent Memory—"What did you have?"

H. H.—"It wasn't what I had; it was because my wife left for the country this mornin'."—Exchange.



Pick Your Buyers From a Crowd

Why be content to take whatever you are offered for your fruits and vegetables by a mere handful of buyers?

Why not pick the highest bidders out of a crowd of 300 to 350? That's what you can do when you sell through our daily sales.

Then you are sure to get the highest market prices—sure to get wider distribution for your goods—sure to sell every car consigned to us the day it is received, before there is chance for deterioration.

Furthermore, we mail you check for your goods within 24 hours after sale. And you take no credit risk, for you're dealing with a concern that has been in business over a quarter of a century and which has a capital and surplus of \$1,000,000.00.

Write for **FREE** illustrated booklet, "More Dollars for Fruit Growers." It will open your eyes to the possibility of bigger profits. Write for it today.

The Fruit Auction Co.

Established 1896

202-208 Franklin St.,
New York City



Winter Tree Guards

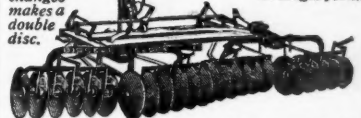
The season of heavy snows each year collects a heavy toll in damaged fruit trees. Excelsior Wire Mesh-Tree Guards will positively safeguard young trees against gnawing animals. Rust proof. Cost but a few cents each. In various sizes. Write for booklet A.

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A few simple changes makes a double disc.

SPECIAL ORCHARD DUAL-PURPOSE TRACTOR DISC. In single form



With trees to right, soil is pulled away and with trees to left, soil is thrown back. Returning on same track leaves soil level as with a Double Action Harrow—Disconnect right section and attach behind left and you have a regular Double Action Harrow—A Real Dual-Purpose. The Handy Control is quick and effective. There is a BISSELL for every tillage need. Sample shipped you on approval.

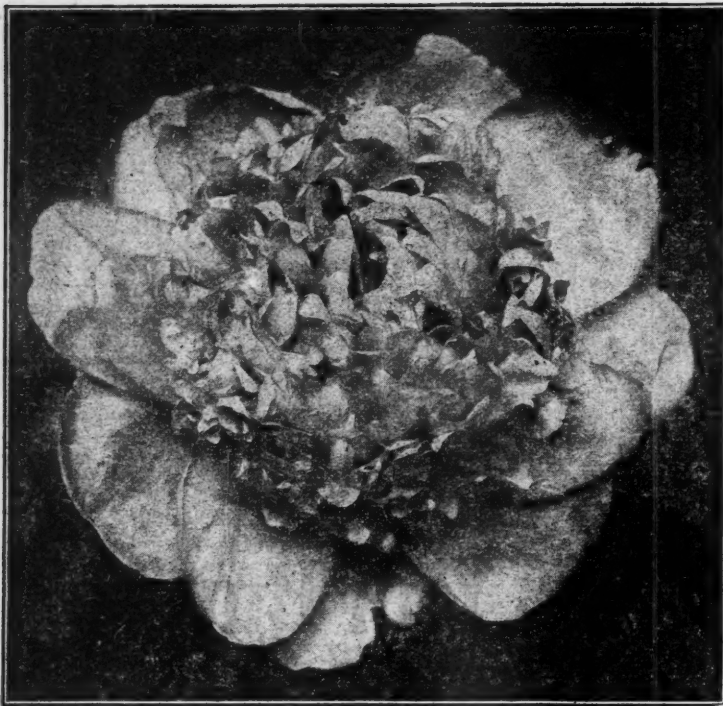
Mfg'd only by T. E. BISSELL CO., Ltd., Elora, Ont., Can.

Maloney's FRUIT and ORNAMENTAL TREES

An Advertisement

Maloney Trees are guaranteed true to name and free from disease by the largest nursery growers in New York State. For 40 years we have been in business here in Dansville and today are able to ship you direct better trees than ever before because we are constantly studying to improve our methods. We recognize our responsibility to the fruit grower and we have this fall issued a novel Catalog that tells the things you ought to know about our business. Write for your free copy. No order is too big or too small for us to handle personally.

Fall Planting Pays—Send today for Free Catalog. We Prepay Transportation Charges
MALONEY BROS. NURSERY CO., Inc., 69 Main St., Dansville, N. Y.
We're responsible: Look up our rating. Dansville Pioneer Nurseries



2 Grand Peonies

Your Choice of Red, Pink or White

Set Out Plants this fall and they will bloom next spring.

This is the kind of an offer you have been looking for—a gift from the publisher—your choice of either 2 Grand Peonies or 4 Superb Iris. Read the following, and then send in your order, stating which plants are wanted.

The Peony is truly a noble flower, rivaling the rose in brilliancy of color and perfection of bloom, while greatly surpassing it in size and stately grandeur. They are of the easiest culture, of most from disease and insects. No other flower is so well adapted for large showy bouquets and specimen plants on the lawn. The foliage is rich, glossy and ornamental, even when plants are not in bloom. They make a grand show, and are gaining in popularity every year. Fall is the best time to set out the roots. Plant in September, October or any time before the ground freezes, setting the crowns two inches below the surface. The roots we send are blooming size and, if planted this fall, should begin blossoming next spring. They are hardy everywhere and may be left undisturbed for twenty years or more.

4 Irises

Blue, Purple, Lavender, White, Yellow or Pink

The improved varieties of Iris, with their varied hues and bright colors, are the most beautiful you ever saw. Their stately habits, their gorgeous effects, their wonderful coloring and their freedom to bloom have well entitled them to the name of the "Orchid of the Hardy Garden." The Iris is adapted to almost every condition and climate, is a magnificent hardy perennial and a favorite everywhere. They bloom during a long period of time, require practically no care or attention, and grow and thrive in nearly any kind of soil.

We have made arrangements with a reliable and well known Iris and Peony specialist to supply our subscribers with blooming size roots at the proper time for fall planting.

Our Offer To You

We will send you either of these splendid collections for a club of two 3-year subscriptions to the **AMERICAN FRUIT GROWER MAGAZINE**. The Peony Collection is composed of two peonies, and you may have your choice of red, pink or white. The Iris Collection is composed of four Irises and you may have your choice of blue, purple, lavender, white, yellow or pink.

You may include your own subscription if you wish, and it will be extended from the present expiration date, but under no circumstances will we send you either of these collections for your own subscription alone. You must send two subscriptions, or if you send four subscriptions you can have both collections.

Be sure to write names and addresses plainly. Don't hesitate! Don't delay! Mail the coupon today!

AMERICAN FRUIT GROWER MAGAZINE,
53 W. Jackson Blvd., Chicago, Ill.

I enclose \$..... in acceptance of your offer in September AMERICAN FRUIT GROWER MAGAZINE. Send me the collection checked below, in the colors marked.

☐ Peonies ☐ Red ☐ Pink ☐ White
☐ Irises ☐ Blue ☐ Lavender ☐ White ☐ Yellow ☐ Pink ☐ Purple

Name

Street or R. F. D.

P. O. State

NOTE—Write the names and addresses of subscribers on separate sheet and pin this coupon to it.



Influence of Co-operative Marketing on Prices to Members

(Continued from page 3)

are not at all similar to the work that has enabled locals to benefit their members. Large scale co-operatives secure their financial gains through effectiveness in the merchandising of the products for which they are responsible. In both federated and combination forms of organizations, the complete work of merchandising is divided between locals and the central selling organization. The locals do that work which they can do best, assigning to the central that for which it is specially fitted. In the completely centralized form of organization, the central runs branches wherever necessary to do the work that locals would otherwise do, and combines with these services the performance of the services which a federated central selling organization renders.

Influence of Large Scale Co-operation on Price

Large scale co-operative marketing organizations, with sufficient volume to develop efficient and specialized sales service, associated with adequate storing and distributing of highly standardized, graded products, have secured real and lasting financial benefits for members. This does not mean that they have held anyone up and forced an arbitrary price, nor does it mean that they have obtained equally high prices during each successive year. It merely means that the prices received have been the highest obtainable considering the product, consumers' wants and the services the co-operative sought to render. Just what these financial gains through co-operation have amounted to is worth noting.

Tillamook Wins Premium Prices

One of the best examples of successful large scale co-operative marketing is that of the Tillamook County (Oregon) Creamery Ass'n. It is a clear tangible case because it represents how farmers have lifted a mediocre product out of the mediocre class, both as regards the grade of commodity and the system of marketing. The financial gains due to improved marketing services have been considerable. They are definitely measured in a relative way by comparing Tillamook and Wisconsin prices after allowing for freight differentials to the Pacific Coast markets. According to the following tabulation, Tillamook has changed its position from receiving lower prices than Wisconsin to one of securing higher prices than Wisconsin. This price advantage, through better all-round marketing services, while varying from year to year, has enabled Tillamook to change from a half cent or more below Wisconsin to a quarter of a cent to more than four cents net above Wisconsin. The figures on pounds of cheese sold and the cents below or above Wisconsin price levels are as follows:

Tillamook Volume and Price Improvement

Year.	Pounds of Cheese sold.	Net price level as compared to Wisconsin	
		Below	Above
		Cents per lb.	Cents per lb.
1915.....	4,043,875	3.30	....
1916.....	4,335,817	2.81	....
1917.....	4,974,328	2.57	....
1918.....	5,036,900	2.06	....
1919.....	6,091,259	....	.29
1920.....	6,436,600	....	1.92
1921.....	6,722,893	....	3.04
1922.....	6,615,967	....	4.45
1923.....	7,113,076	....	1.18

The figures in this tabulation show nine years of operation. Prices for the last four years were more than four cents per pound higher than for the first five years. Four cents on top of a 20 to 25-cent price level represents a 16 to 20 per cent price increase for co-operators in this case. But this is not all that has been accomplished. Originally, there were 40 local factories making only 1,000,000 pounds of cheese. This was 25,000 pounds per factory, a very small volume of business. Today the cheese-

making work is done by 25 local co-operative factories, making 7,113,076 pounds of cheese. This is 284,525 pounds per local, or over 11 times as much as originally. The result of this consolidation work among locals has made possible the attractive economic sizes of cheese factories. As a result, they have been able to employ some of the country's most able cheesemakers. The cost of operation in these large cheese factories is scarcely one-half the average cost of making cheese in the usual size of factory. Hence, the usual making cost of 22 per cent of the sales price has been reduced to 11 per cent, thus saving the farmer 11 cents on each dollar's worth of cheese sold. This gain has come through the improved work of the local co-operative organization.

Co-operation Pays in Tillamook

The Tillamook co-operative marketing system, according to this brief analysis, has conservatively saved 10 cents on the dollar by the work of the local and has earned an additional 15 cents on the dollar by its federated central selling organization. Adding these financial gains together, these co-operators are making a quarter of what they receive in farm prices by virtue of their co-operative spirit and its practical manifestation in the marketing system which it has created and maintains.

Other Co-operatives Show Gains Also

Just as the figures record worth while results in Tillamook, so also would they indicate favorable results for some of the other old and well-established co-operatives, were similarly comparable figures available. Upon the fragmentary information regarding co-operative livestock commission and grain commission companies on the terminal markets, successful co-operation has returned to members from one-third to three-fourths of the commission earnings. While the commission amounts to only about one per cent of sales, still co-operation makes some real accomplishment even in this field to outdo what the private middleman professes to be unimprovable. In fruits of various kinds, potatoes, butter, bacon, eggs and other products in a half dozen countries, a number of noted co-operative marketing companies have achieved results comparable to Tillamook for their co-operating farmer members.

"Sunkist" Citrus Organization a Marvel

The California Fruit Growers' Exchange is the world's oldest, and, for many years, the largest federated co-operative marketing system. Its annual sales of more than \$50,000,000 worth of citrus fruit reach to every corner of the nation. Its tangible reduction of packing costs of 20 cents a box in the local associations, and the rendering of comprehensive sales service for seven cents a box in place of the original 35 cents charged by the old private system, save the industry \$9,000,000 a year. This is \$300 on an average for each member. The extent to which this organization has raised prices or sustained them in the face of increased production is impossible of measurement in the manner used in the case of Tillamook. With the most comprehensive plan of marketing known to any competitive industry, there is no question but that California citrus growers owe much to its able sales service. To what it has done in cost reduction work amounting to 40 to 50 cents per box, must be added an equal or much larger gain through premium prices secured by its distributing and salesmanship work throughout the United States and Canada.

Enviably Results of Eastern Shore of Virginia Co-operative

Among the most experienced and successful co-operatives is the Eastern Shore of Virginia Produce Exchange. Its annual sales of \$10,000,000 or more gives this company a unique position. Red Star and Gear-wheel brand potatoes sell at prices

(Concluded on page 24)

The Orchard Home Department

by Mary Lee Adams

English Orchard Homes

THE ENGLISH orchard woman would open big eyes could she take a peep into one of our orchard homes. To her, many of its features would seem almost arrogantly luxurious. From dawn to dark her household must be conducted on a more primitive, and consequently more laborious basis than even such homes of ours as may be rated only fairly prosperous.

Daily Routine Difficult

Upon rising, the members of the family make their approach to Godliness, not through a well-appointed bathroom, but by means of an old-fashioned "jug" and basin. The severity of this method is softened by the English custom of allotting to each person a matutinal can of warm water. Very decorative these cans are, being of polished brass or tin in many quaint shapes and enameled in many pretty colors.

The warm water, however, is not obtained by the simple method of turning a faucet. It is heated in kettles on the kitchen stove or over a charcoal heater. Not only is there no system of water-works in the usual rural home, but there is no furnace. And let me tell you that while the Englishwoman may covet your bathroom and kitchen sink, she is quite unenvious, even a little superior, on the subject of "central heating" and claims the advantage lies with numerous coal grates. We can readily imagine that in the chill yet hurried hour that precedes a farm breakfast, not many of these grates are glowing.

In the daily household tasks, there is no help to be looked for from any new-fangled patent appliances. The vacuum sweeper finds no place beneath its tiled or thatched roof. Laundry is accomplished by the application of plain, old-fashioned elbow grease.

Hired Help Not So Scarce

Here the English woman has the advantage, for it is rarely that she is left entirely without domestic help. True, a single maid is often expected to include in her manifold duties some outdoor work on the farm, which necessarily deprives Madam of the full benefit of her services. Nor is she immune from the wide-spread American failing of fitting frequently from place to place. The servant question is here, as there, an agitated one.

It seems probable that Eve, as the first woman, early perceived the futility of trying to secure a hired girl, but then Eve did only the lightest of light housekeeping. By the time her daughter's daughters came into existence, it is safe to guess that the servant question was already a vexed one.

Yet, such as she is, the English farm woman-servant is procurable, and expects to do more work than our home-grown girls. American women might not bemoan their too frequent maidless condition so bitterly if they realized that this deficiency has given a tremendous impetus to the invention of a host of labor-saving devices that rob so many of our household tasks of their difficulty.

Fewer Cars in Use

With the dishes done, you, lucky reader, are wont to stroll over to your 'phone and ring up some friend with whom you make a social engagement. To that engagement you drive in your car. Both these things are denied to most English orchard women.

In a way, she needs an automobile less than you do. Her neighbors are nearer. There's sure to be a town not far off. England has no such magnificent distances as ours. A horse-drawn "trap" suffices to cover the radius of most social intercourse. Even so, the ubiquitous Ford is rapidly invading English farms, and more and more farm produce is brought to market by motor vehicles.

As night falls upon the English orchard home, no twinkling lights pop

out at the pressure of a push button. In our rural homes, if electric lights are still lacking, we are at least talking of the time when the line shall be run near enough for us to tap it. But in rural England, electric lights and even gas are, as one might say, neither born nor thought of. Oil lamps, lanterns and candles are their sole dependence.

Orchard Women Wide Awake

But don't imagine that lack of the conveniences we are so used to that we scarcely appreciate them, indicates that our English cousins are swallowed up in toil. They take a lively interest in the Women's Institutes, whose aims are both social and educational. Members are supposed to pass on to others any helpful bit of domestic knowledge. Lecturers are secured for the meetings. Various branches of home Economics are taught.

Jam-making is especially encouraged and you may believe that jam is no light item in England. Any self-respecting breakfast-table would blush to be seen bare of jam. The "bottling" of fruit receives much attention. "Bottling" is a puzzling term until one discovers that bottled fruit is merely fruit put up in glass jars. "Canned" fruit is found only in tin cans.

The Institute women are fully alive to the questions of the day. World peace, tariff, good roads, taxes are discussed animatedly and intelligently. There is a Woman's Horticultural College at Swansey and courses in horticulture are open to women at other colleges. In Sussex, there is a Woman's Co-operative Market. Have we anything like that? Farm produce, jams, etc., are disposed of at this market. It is said to be successful.

The Fruit Crop

Apples, pears, plums, cherries, strawberries and gooseberries are the most considerable fruit crops. In the harvesting of small and soft fruits, such as strawberries, women pickers outnumber the men. They are paid less by the hour but payment is more often on piece work. An industrious strawberry picker may average eight or nine shillings a day at this back-breaking toil. This amounts to something under two dollars at the present rate of exchange.

Seasonal work in fruit has resulted in much the same conditions as with us. Entire families attend hop picking and regard it as a sort of summer excursion. Men and women pickers are brought into the larger commercial fruit farms at harvest, and accommodations of widely varying excellence are provided.

As a rule, the larger and more important the orchard, the better is the provision for the comfort of pickers. Some growers even erect special comfortable and sanitary two-story buildings for girls and women. This naturally results in a better class of pickers.

Orchard Acreage Small

Yet when all is said and done, the fruit industry of England does not strike an American as very considerable. It is on a less professional basis. Even where fruit is grown commercially, it is usually but one item of general farming. Ten to 50 acres of apples is about the limit of single orchards. The smallness of the area is not offset by intensive cultivation. Pruning, spraying and fertilization lag behind ours. Cold storage is slow to gain a foothold. Home consumption quickly disposes of home-grown fruit. England eats her own apples from July to October, she consumes United States and Canadian apples in the winter, and in late spring and summer the fruit-stalls exhibit Tasmanian, Australian and New Zealand apples.

Everyone at home seems to believe that fruit in England is very scarce and high, but while less varied than with us, it is fairly abundant. Oranges in April were actually cheaper on London streets than in Washington, D. C. The Secretary of Horticulture tells me that even the poor of London may eat apples, oranges and bananas in reasonable quantities.

Flowery Country Homes

On the whole, the condition of the English orchard woman should tend to increase our contentment with our own lot. Yet, if we passed by an English orchard home in May, a sigh of pure envy might escape us, it looks so cozy, so lovely, so altogether charming. There stands the fragrant orchard in full bloom. And here is the homestead with its picturesque thatched or red-tiled roofs. Great spreading shade trees, rooted in velvety green grass, frame the buildings, and the dwelling is embowered in flowers.

These people, aided by their moist climate, show a perfect genius for flower gardening, and every home has a constantly lovely array throughout the blooming season. And ah! the wonderful shrubbery around these nestling cottages. Below century-old horse chestnuts, set thick with large spikes of pink and white blossoms, are clumped an enchanting display of pale pink, brilliant rose, or snowy white hawthorn, the sweet English "may." Lilacs of every hue, from deep purple to rosy orchid, perfume the air with their fragrant plumes, and laburnum drops its golden shower over sheets of dainty blue-bells. Thrushes, larks, even nightingales, sing madly in the thicket. The tiny redbreast hops straight up to one's feet. The cuckoo calls from the wood on the identical note of the wall-clock.

With such a little paradise to revel in through the long hours of summer sunshine, what woman is going to sigh for lack of electric lights—at least until winter comes?

London Musings of Mollie

IF BOSTON owes its crooked streets to having been laid out by a wandering cow, London must have been laid out by a centipede running in a different direction with every leg.

One would have to roam all over 48 States in the U. S. A. to find as much historical interest as in this single city.

The more I see of palaces, the better I like home.

English men, on the whole, dress far better than English women.

Women keep on their hats at the movies, which here are called Cinemas.

Complexions are brighter. There's a lot less rouge and lipstick and much more natural color to be seen in the streets.

Remarkable, glowing beauty is the rule rather than the exception among the children. It's the other way round later on.

Children wear clothes so short as to be perilously near the waist-line. A great expanse of chubby leg, ruddy in the raw air, trots on every side-walk. The skirts of girls already lanky from the approaching 'teens, clear the knee by an alarming distance. Socks prevail.

In roaring London, the chance passer-by is never too busy to go out of his own way to direct you on yours, just as neighborly as we would in the country.

It's a pleasure to ask a London policeman a question. "Bobby" not only knows the answer but gives it with a smile.

Confirmed coffee drinkers from America have been driven by the sad quality of their favorite beverage to

become tea-topers in London. The tea is excellent.

If you tire of cold bread, you may order hot toast. It will not be much more than 24 hours away from the fire. English men-servants are said to spend all their spare moments making toast and putting it away in a drawer. You'll believe this when you get the toast.

After all these years, London papers are heralding the idea of opening a "help yourself" restaurant. They say that on the other side of the Atlantic such places are called Cafeterias.

More flowers, lovelier flowers, cheaper flowers in pots and bunches than can be seen anywhere else, overflow the push-carts and street corners of London.

Woman Fights Witch-Burner

HOW FAR has the civilized world outgrown rank superstition? We are not too much surprised to learn that descendants of African tribes still practice "Voodoo" down in Louisiana and on some of the sea islands off the coast of Carolina. Few white people visit these islands and they are more remote from any influence which would tend to redeem them from savagery, than the miles which separate them from shore would seem to warrant.

It is an amazement, however, to find that an active belief in witchcraft is extant among the peasants of so highly sophisticated a country as France. A Breton peasant lately tried to burn a woman alive for supposedly casting a spell upon his pigs! Farmer Dinant's pigs suffered unusual misfortunes this past season and their owner came to the conclusion that a spell had been cast upon them. That such a conclusion was not singular in this locality is proved by the presence of a recognized wizard who, quite in the most approved fairy tale style, dwelt in the depths of a neighboring forest.

To the wizard hied Farmer Dinant with his tale of woe and received the expert's advice to seize and burn alive the first person who should enter his farm yard after his return home. Perhaps the simple peasant gave a few uneasy thoughts as he jogged homeward, to the possibility of the first person being a bigger man than himself. We may picture his relief when the proposed victim entered in the form of a woman.

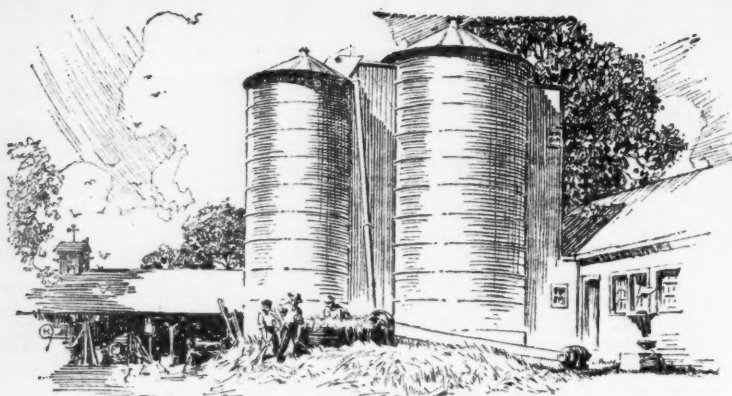
Here surely was easy work. But the lady in question proved, in spite of her sex, to be the better man, and she thrashed the farmer well. Moreover, she had him arrested. The punishment imposed upon the would-be murderer seems not excessive. It was fixed at one month's imprisonment. He was taught his lesson cheap and is probably freed from his superstition even before being freed from confinement.

Surgeons' Debt to a Woman

THE SURGEONS' curved needle, now regarded as indispensable, was invented by Ella O'Neil Gaillard. If you are old-fashioned enough to wear hose-supporters, give a grateful thought to this same woman who invented the rubber covered button for garters. You owe to her a part of your daily comfort. The kiddies should know that when they laugh and play with their beloved musical top, they are indebted for their joy to her versatile genius.

It's sad to learn that this benefactor has not gained the reward that was her due. Like many inventors, the profits of her brain have been reaped by others. She is said to be now, at the age of 85, living in want in Philadelphia.

And now the new divorce rings are adding almost as much trade to the jeweler as the old-fashioned solitaire and plain gold band,



Farmers and Electrical Engineers are putting their heads together

IT doesn't pay a farmer to carry a single bushel of wheat to the railroad station. He is a bulk producer. He must sell in bulk. So it is with electricity.

A National Committee of economists and electrical and agricultural engineers has organized state groups of farmers to whom electricity is being supplied. These groups will receive electrical facts from engineers and will in turn give the engineers farming facts. The state agricultural colleges guide these groups—show them how to apply electricity and how to keep records of power consumed, time and labor,—records which can be compared with those obtained under non-electrical conditions.

Farmers do not profess to be electrical engineers, and electrical engineers do not profess to be farmers. But by putting their heads together they are adapting electricity to farming. Ways of utilizing electricity could be discovered that would be profitable.

Co-operation of this kind is now bringing about greater electrification.

As a result both the 500,000 farmers who have electric service and those who have never had it will profit. For electricity will be applied in ways never dreamed of before. Crops will be produced and handled with less labor and at lower cost. The standard of living on the farm will be raised.

All the conditions to be faced are not known. And as soon as they are known—and that will be very soon—there will be fewer farms on which men and animals do all the work.

The Committee in charge of the work is composed of economists and engineers representing the American Farm Bureau Federation, the Department of Agriculture, the Interior and Commerce, the Power Farming Association of America, the American Society of Agricultural Engineers, and the National Electric Light Association.

A booklet has been published by the Committee. It will be sent on request free of charge. Read it and pass it on to your neighbor. Write for it either to Dr. E. A. White, American Farm Bureau Federation, 58 East Washington Street, Chicago, Ill., or to the National Electric Light Association, at 29 West 39th Street, New York City.

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UNITED SALES COMPANY,
Carthage, Mo.

CHATS WITH FRUIT GROWER'S WIFE

By HAZEL BURSELL



Comfortable Work Clothes

IT IS just as important to have becoming and comfortable work clothes as it is to have pretty and fashionable street attire. No woman can retain her self respect if she wears ill-fitting, slouchy, unbecoming every-day dresses, no matter how nice she looks when "dressed up." Neither can she really enjoy her nice clothes if she must always carry with her a vision of her bedraggled week-day self. She owes it to herself, her family and her community to appear well.

Silks and satins are out of place for daily wear. But there are many pretty cotton materials, including ginghams, crepes, prints, cretonnes, flowered sateen, galatea and even denims for rough wear. These come in every conceivable color in plain or figured patterns. Choose a color that is becoming to your particular hair, eyes and skin, and choose one that is also pretty in itself. A quiet color in the softer shades will be found most satisfactory. The material should be of such a nature that it can be easily washed and ironed, it should not fade, and should not soil too easily. Ginghams and crepes meet these qualifications best. Crepes do not need ironing.

Simple Dresses Best

Straight-line, one-piece dresses will be found most comfortable, as they allow for unhampered movement and do not "get in the road." They are easier to wash and iron than fitted and gathered garments, also they are easily made and require less material. Why not always have short sleeves on house dresses? If you have long sleeves, you have extra ironing all for nothing, and you have to roll up your sleeves when at work. Collarless dresses will be cooler, easier to make and wash, and more comfortable to wear. The neckline can be finished with a facing or binding.

It is no disgrace to wear clothes which have been neatly patched and mended. Far from it! But it is decidedly a waste of time and energy (both priceless to a busy person) to patch and mend a cheap cotton garment until the patches are all that hold it together. Ye editor has seen housewives do that very thing, especially in the matter of underwear. It would pay better to do something else with that much time and then buy new garments with the money earned.

Dainty, Durable Underwear

Daintiness should not be entirely sacrificed to utility in undergarments just because they are covered up when worn and must stand hard wear. Underwear made from scraps of materials cannot be otherwise than ill-fitting, uncomfortable to wear and detrimental to self respect. Nevertheless, some women, guided by an overdeveloped sense of economy, do piece out garments from scraps. Undergarments can be substantial, simple and dainty when made of light-weight white muslin, long cloth, crossbar, checked dimity, or white and colored voiles. Dainty laces of good wearing quality may be purchased as low as five cents per yard and quickly put on by machine, if the seamstress is hard-pressed for time. Machine hemstitching makes a dainty and inexpensive finish. Ribbons and embroidered or silk flowers will add a pretty touch to "dress up" undies.

Buy Comfortable Shoes

Now we come to the shoes and stockings. Comfort and wearing quality are the two "must haves" in selecting shoes. Much of that tired-

out feeling, with aching and swollen feet is due to poorly fitted shoes. Work shoes should have low heels with rubber caps to absorb the jar in walking. They must fit neither too tight nor too loose, and there should be plenty of room for the toes. A person with a high arch should buy shoes that will give it proper support. Be sure that the shoe selected is constructed so that the weight of the body is supported in exactly the right places. High-top boots with sewed tongues are practical for out-door wear in bad weather. Cotton stockings are inexpensive for summer wear, and light-weight woollens are nice for winter. It pays to darn woollen hose many times, but it is not worth while to keep on mending cheap cotton hose indefinitely. Be sure to wear comfortable hose supporters and to always have the hose neatly gartered.

I am not urging that we have a flock of farm flappers of 45, but I think every woman's heritage is the right to becoming, good-fitting and comfortable clothes. Give your daughter pretty things, but keep some beauty for yourself, too. Daughter will love you and appreciate you more if you do. So will the boys and dad. Most of the time is spent in work clothes, so let's have them nice—if they are becoming you will be happier; if they are comfortable you will tire less easily; if they are simple you will have less washing and ironing to do.

Save Your Surplus Produce

ALL seems to be the season of surplus fruits and vegetables, and we should make every effort to save them for winter use. Canning, drying, pickles, jams and preserves offer an infinite number of combinations and possibilities for these things. If you make more than the family can use, try and find a private market for them in town—homes, stores and hospitals. Many farm housewives have made quite an income in this way.

Cull fruits can be made into delicious jams, conserves, preserves, butters, spiced whole fruits, pickled fruits, jellies, etc. Underripe fruits make the best spiced and pickled fruits, while overripe ones make the best jams, and conserves.

Use Unripe Vegetables

Unripe vegetables—tomatoes, etc.—make excellent chopped pickles. Cucumbers, which get ripe, may be made into special sweet pickles. Apples are good in mixed pickles. The surplus green tomatoes, cabbage, onions, cauliflower, cucumbers, and even green beans may be used up in mixed pickles. Get some good recipes and try them out.

Ripe tomatoes, ground cherries, pears, late peaches, and watermelon rinds all make delicious preserves. Prunes and quinces make excellent conserves. Apples and pears are noted for their butters, apples also making fine jelly.

These, in addition to the time-honored methods of canning and drying surplus products, should enable the farmers' wives to save most of the products which would otherwise go to waste, and convert them into delicious additions to the winter stores.

Wedding Anniversaries

AUTUMN and Spring are the seasons of brides, so they must also be the seasons of wedding anniversaries.

Each couple should note the day with something unusual, and thereby strengthen the loving ties. One couple of my acquaintance always add some much coveted article to their household furnishings making their home a record of their anniversaries. An other lover-husband sends flowers—her wedding ones—every anniversary morning. Any carefully chosen gift will be appropriate.

It would be lovely to have the bridal party together for the first anniversary to celebrate the occasion with a joyous little party. Certainly, Silver Weddings should be observed. And Golden Weddings, which are rare events, should be celebrated with all possible pomp and ceremony. The invitations may be engraved in silver or gold as the case may be.

Dons Wedding Dress

For the Golden Wedding, the bride may don her wedding dress. The bridal costume grows with interest as the years pass and is always an object to which much sentiment is attached. It is appropriate to have the letters received at the time of the wedding 50 years ago read aloud. If health permits nothing more at the Golden Wedding, the couple should at least send engraved announcements to their friends and relatives.

The correct form for an invitation to a golden wedding is given below. The word "twenty-fifth" may be substituted for "fiftieth" for the silver anniversary. The dates would also be changed or left off.

Pickles, Relishes and Sauces

IF YOU approach Good Housewife's mansion some time this month or next, you will be assailed by delightful odors—homey smells compounded of many spices, savory herbs and cooking fruits. You sniff delightedly and walk in, knowing that many jars of appetizing relishes, pickles and meat sauces are being stored away for the winter. Each housewife has her own "pet" recipes and from these she concocts the family favorites. But she will not find a few new ones amiss.

Chow Chow

2 gal. green tomatoes 1 doz. red peppers
1 large head cabbage 1 doz. small
1 doz. green peppers onions

Chop each separately, very fine. Mix all these, put a layer of the mixture and a sprinkle of salt in a bag, then other layers of the mixture and salt until all is in the bag. Hang the bag up over night to drain. In the morning, squeeze perfectly dry and put in an agate pan or crock, cover with cold vinegar, let stand 6 hours and again squeeze dry. Season with 1 c. mustard seed, 3 T. celery seed, 1 T. mace, 3 T. allspice, 1 qt. grated horse radish. Mix well. Add 1 lb. sugar to sufficient vinegar to cover and bring to a boil. Pour the liquor boiling hot over the pickle and seal in sterilized jars.

Governor Sauce

4 qts. green tomatoes ½ t. black pepper
1½ pts. onions ½ t. red pepper, or
1 qt. vinegar 3 little peppers
1½ pts. sugar ½ t. each cinna-
mon & mustard
2 T. salt
Put the tomatoes through the food chopper and chop the onions. Add seasonings and mix well. Boil until tender. Seal in sterilized jars.

Dill Pickles

Soak cucumbers over night in hard water, using large cucumbers. Pack in jars. Bring the following to the boiling point and pour over the cucumbers—
6 qts. hard water 1 lb. rock salt
1 qt. vinegar

Dill, cherry, grape and horseradish leaves should be packed with the pickles. From 3 to 6 stalks of dill may be used to the half gallon jar. It is important to keep the pickles free from scum and mold. It may be enough to skim them and add a little oil and vinegar, or it may be necessary to replace the moldy liquid with fresh scalding brine. If the molding process has gone too far. If properly put up, pickles should not mold. When fermentation is complete, pickles that have been put down in a keg should be sealed in jars.

Fresh Grape Relish

Select bunches of grapes of uniform size and ripeness. They should not be overripe. Without removing from the stems, pack the fruit in sterilized glass jars, being careful not to crush the fruit. Make a syrup of 1½ c. of white sugar to 1 c. of white vinegar. Boil for 5 minutes. Pour the hot syrup over grapes to fill jars, and seal. Purple, white or red grapes may be used.

Sweet Cucumber Pickles

Soak cucumbers over night in salt brine; drain and rinse. Make a syrup in proportion of 3 c. of vinegar to 5 c. brown sugar and mixed pickling spice to suit. Boil vinegar and pickle 5 minutes, put in cucumbers and simmer a few

1874

Mr. and Mrs. Walter M. Hamilton request the honor of your presence at the

Fiftieth anniversary of their marriage on Tuesday, June the thirtieth, afternoon and evening at their home
(Insert Address)

Gifts are not obligatory at anniversaries, but most guests want to give them. Many suitable ones of tin, wood, cotton, linen, silver, gold, etc., can be secured and are appropriate for the occasion. The anniversaries are as follows:

One Year—Cotton Wedding.
Two Years—Paper Wedding.
Three Years—Leather Wedding.
Five Years—Wooden Wedding.
Seven Years—Woolen Wedding.
Ten Years—Tin Wedding.
Twelve Years—Linen Wedding.
Fifteen Years—Crystal Wedding.
Twenty years—China Wedding.
Twenty-five Years—Silver Wedding.
Thirty Years—Pearl Wedding.
Forty Years—Ruby Wedding.
Fifty Years—Golden Wedding.

EVERY housewife should have an oilcloth or rubber apron in the home to wear when she is washing, scrubbing, canning fruits, etc. It saves both the clothes and comfort of the wearer. They look neat and tidy besides. The housecleaning apron may be of black oilcloth and should have lots of pockets for carrying dust cloths, etc.

minutes. Pack pickles in jars and pour over boiling hot vinegar and seal.

Mixed Cucumber Pickles

Use small cucumbers with sprigs of cauliflower and small pickling onions. Parboil in salted water and rinse in cold water. Simmer for a few minutes in syrup made as for sweet pickles above. Pack in jars. Fill jars with syrup and seal.

Mustard Pickles

24 small cucumbers 2 cauliflower heads
2 qts. small onions 2 qts. diced green
3 red and 3 green tomatoes
peppers

Chop the cucumbers, break cauliflower apart, slice peppers and mix with diced tomatoes. Let mixture stand over night in salt water, using ¾ c. salt, with water to cover. In the morning, scald in same water and drain. Then prepare 3 qts. good cider vinegar, 4 c. brown sugar, 1 c. flour, 1¼ oz. can mustard, 2 T. celery seed, 1 rounded T. turmeric powder and a few bay leaves (steep in vinegar and remove). Pour liquid on the pickles and mix thoroughly. Seal in sterilized jars.

Beet Relish

2 qts. cooked beets 2 c. horse radish
diced 3 c. vinegar
1 qt. cabbage cut 1 red pepper
fine Salt to taste.
Mix all together and seal in sterilized jars.

Picalilli

10 lbs. cabbage 8 large onions
1 gal. green to- 2 bunches celery
matos 3 green peppers

Chop above ingredients quite fine and add 1 c. salt. Let stand till morning, then squeeze out well with hands. Mix 2 qts. vinegar, 1 qt. sugar, 2 oz. white mustard seed, 2 oz. celery seed, 2 T. ground mustard. Bring the liquid to a boil and then add cabbage, tomatoes and peppers. Boil 40 minutes and seal.

Corn Relish

18 ears sweet corn ¼ c. salt
1 large cabbage ½ lb. sugar (brown)
4 onions ¼ lb. mustard seed
3 green peppers 1½ qts. vinegar

Cut corn off of ears and run cabbage, onions and peppers through coarse knife of food chopper, and mix well together. Add other ingredients, boil 30 minutes and seal in sterilized jars.

Abbreviations

1 c. equals 1 cupful.
1 t. equals 1 teaspoonful.
1 T. equals 1 tablespoonful.
1 lb. equals 1 pound.
1 qt. equals 1 quart.
1 pt. equals 1 pint.
1 gal. equals 1 gallon.
1 oz. equals 1 ounce.
All measures level.

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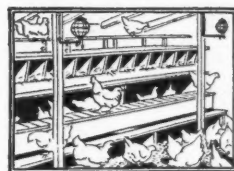
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This slip can be made with built-up shoulders or with straight upper edge with shoulder straps. Cut in sizes 16 years, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 36 requires 2½ yards 36-inch material.

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Cut in one size and requires 1½ yards 36-inch material with 7½ yards binding.

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inches bust measure. Size 36 requires 4½ yards 36-inch material.
Hot-iron transfer pattern No. 700 (blue only) costs 15 cents extra.

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Cut in sizes 8, 10, 12 and 14 years. Size 8 requires 2½ yards 36-inch material.

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Cut in sizes 6, 8, 10, 12 and 14 years. Size 8 requires 1½ yards 36-inch material for the blouse with 1 yard 40-inch material for the skirt.

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Influence of Co-operative Marketing on Prices to Members

(Continued from page 20)

above all other potatoes sold in appreciably large commercial volume. There is no question but that this organization is doing for Virginia potato growers as much as any other co-operative has done for its members. The proof is less tangible than Tillamook largely because data has not been gathered and arranged for comparative purposes.

Eatmor Cranberry Organization Famous

Perhaps no company has persisted in its successful sale of a crop in the same degree as has the American Cranberry Exchange. Leaders of co-operative groups who have not followed the progress of this organization will be deeply interested in the annual reports and diagrams prepared by its general manager, as well as in the United States Department of Agriculture Department Bulletin 1109. After years of experience, this organization has perfected its work in such a manner as to secure relatively favorable prices even during years of unusual or abnormally large production. This is clearly illustrated by the chart from the 1922 crop season report of the Exchange.

The Other Half of Co-operation

While co-operative marketing, when successful, rewards its members with relatively better prices than they would otherwise have received, this direct financial gain is only one-half or less of the real benefits of an old and cherished co-operative system.

In giving a few of the numerous examples available to show that co-operation pays in its actual financial results, it must not be forgotten that the non-financial benefits of co-operation may be as valuable to the farmer as higher prices. To be in position to convert a larger proportion of his farm prices into farm profits is of greater consequence to him than the price level itself. Co-operative marketing in its outstanding cases gives farmers the largest possible share of the consumer's dollar. This means also that they receive the highest level of farm price possible. But a mere farm price is not profit. Not until costs of farm operation have been deducted from farm prices are profits definitely measured. It is profit the farmer wants and must have if he is to prosper. Profit is the difference between price and cost. Any farmer who has become a thoroughly good co-operator in an efficient organization is as much better able to defate his costs as his company is able to return him a favorable price. The more favorable both prices and costs are, the better off the farmer is in terms of net profits. The financial benefits of co-operative marketing affect farm prices as favorably as can be hoped for. The non-financial benefits influence the farmer's state of mind in such a way as to free him from delusions so that his time is spent constructively in producing farm commodities at minimum cost. Here, then, is the great hope of co-operative endeavor, to give the farmer a marketing machine that yields the best results in price and which also puts him in a frame of mind to produce highly salable products at costs which leave him the kind of profits he wants. That such results have come in many regions should be an inspiration for farmers in other sections to develop equally successful organizations.

Government Inspection and the Fruit Industry

(Continued from page 4)

"indispensables" to many of the heaviest long distance fruit shippers.

The Leaven in the Measure of Meal

The problems of successful inspection are twofold: first, specific and workable grades; second, personnel, or the finding of the right men to apply the grades.

The department had in its market stations a highly trained but relatively small group of men. A few states had in their employ equally well trained men who had graduated from our service. A few of these and a few of ours became trainers and supervisors of the hundreds who were licensed by the Federal Department and paid by the states as joint Federal-State inspectors.

Of the 72,466 certificates issued at shipping points the first year, only 34 were reversed on reinspection in the markets. In the second year, about 130,000 such inspections were made and the reversals were still about one in each 2000 cars. Such is the contagious power and the stimulus of enthusiasm over a new and worthy endeavor. Such, incidentally, are the opportunities which the Bureau of Agricultural Economics offers to men blessed with vision and the qualities of leadership.

What the Service Has Done

First, it has brought the real meaning of standardization home to the grower with a bang.

The Federal grades have been arrived at by the most comprehensive study ever made of each product over its whole geographical range. The grades must fit the product actually grown, but they must also reflect those elements which determine market value.

Second, men who pool their shipments have a new and better basis for their pools. The fear of favoritism is largely, yes completely, eliminated.

Third, a definite basis of sale has been established, which is accepted and understood by seller and buyer the continent across. It is equally applicable to cash or future sales.

Fourth, the shipper is forearmed as never before in case his shipment is rejected on arrival or in case it arrives in bad condition. The advantage which the western shippers foresaw has been fully realized in practice. Said one: "This is the best \$5 worth of insurance that I buy."

Fifth, many exporters and foreign buyers are already refusing to handle any but officially certified apples. This fact bears eloquent testimony to the high uniform standard in the work.

Sixth, this service rendered possible the f. o. b. wire auction companies, whose spectacular rise in the first year of this work is one of the most striking of business developments.

I know of nothing which bears more conclusive testimony to the essential soundness of the permanent, civil service organizations of the Government than to see an auctioneer in Boston sell a car of highly perishable fruit to a crowd of men when no one in the room has seen a sample and the car itself has not yet crossed the Rocky Mountains on its eastward way. The secret, of course, lies in the catalogue, which is a list of telegraphic reports of the findings of the Government inspector at the shipping point on each car.

Many other uses and advantages of this service might be elaborated but to do so would fill an entire issue of this magazine. An effort has been made to sketch the origin, growth, methods and outstanding results of the service to date without exhaustive treatment.

Re-organization of Florida Citrus Industry

(Continued from page 7)

neither Rome nor Florida were built in a day and that great movements of progress always travel slowly, if they stick by the faith they have manifested and by the organization under which they have enlisted, the Florida Citrus Exchange is destined, within a reasonably short time, to embrace the greatest era of prosperity it has ever known.

Co-operation, efficiently carried out, has always proved the solution of agricultural problems. It will take a long pull, a patient pull and a strong pull, but if these are made, one of the most profitable and most fascinating industries in the world will climb the heights to where the Sun of Prosperity will shine on it.

BETTER HOME DEPARTMENT

Storing Fruits and Vegetables for Family Use

by E. W. Lehmann

HE IS both wise and thrifty who stores a supply of apples and vegetables during the late summer and fall when they are plentiful because he will then have a winter supply without paying winter prices. There is a lot of truth in the old saying that "an apple a day will keep the doctor away." The same might apply to vegetables. Ordinarily, we do not have enough fresh vegetables in our diet during the winter months. For this reason, every farmer, fruit grower and city man should provide some means of storing fruits and vegetables for winter use.

In many cities, cold storage plants make a practice of allowing their

Sound Products Give Best Results

While this article deals primarily with methods and the requirements of fruit storage from a mechanical standpoint, it must not be overlooked that the first requirement of successful fruit and vegetable storage is a sound product. Vegetables and fruits that are of poor quality or diseased, or bruised due to rough handling are bound to spoil under the most ideal conditions. Store only the best products if you would get best results.

Requirements for Successful Storage

The chief requirements for successful fruit storage are proper ventilation, correct moisture conditions, and the right temperature. The cellar or storage must be well drained. The chief difficulty of storing fruits and vegetables in a basement room is maintaining proper temperature and moisture conditions. If the house is furnace heated, special attention will have to be given to partitioning off a room by means of a well insulated wall. This room should have an outside opening, so a relatively low temperature may be maintained. Apples and root crops other than sweet potatoes could be stored in this room. Sweet potatoes keep best where the air is dry and warm, and they should be well ventilated so they will dry out properly.

Special Storage Room in Basement

Every house that has a basement should have a vegetable and fruit storage room. It should be well insulated from the rest of the basement. A double wall is desirable, and it should be tight and well constructed. There are very few such rooms that are properly insulated. Even with the greatest care in construction of the basement storage room in the ordinary home, it is always difficult to keep products for a very long period without considerable spoilage. Extreme care must be observed in regulating the temperature. By opening the outside window, there is danger of the room getting too cold in extreme winter weather, and the window must be closed at the proper time to avoid freezing the products that are in storage. One should also avoid too much light. For this reason it is well to provide a screen over the window if considerable light enters.

Outside Cellars

Where a storage room in the basement is not provided, an outside cellar should be constructed. Apples and vegetables may be kept throughout the winter months in a properly

(Concluded on page 28.)

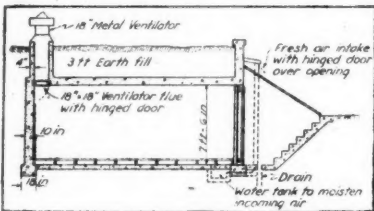


Figure 1—Cross-section of a cellar made of concrete

customers the privilege of storing fruits for a small storage charge. The products may be removed from storage a bushel or more at a time. Many times two or more families cooperate and store a number of bushels, and they are divided when taken from storage. Where a cold storage or refrigerating plant is not accessible, a fruit and vegetable storage cellar, or special storage room in the basement, is the solution of the winter supply of fruits and vegetables for many housewives.

Trenches and Pits

There are also many simple practices followed in storing apples and vegetables that are quite effective. The most common is to store in a well-drained trench or pit covered with layers of straw and earth. Sometimes barrels or other containers are used, being set into the ground and partially or entirely covered with earth, depending on how cold it is. Due to different temperatures and moisture conditions in different parts of the country, practices will vary. For convenience in use, adequate storage capacity, and better fruit, the outside storage cellar or fruit room as a part of the house, is best. By providing more home storage, better fruit is available and much waste is eliminated.

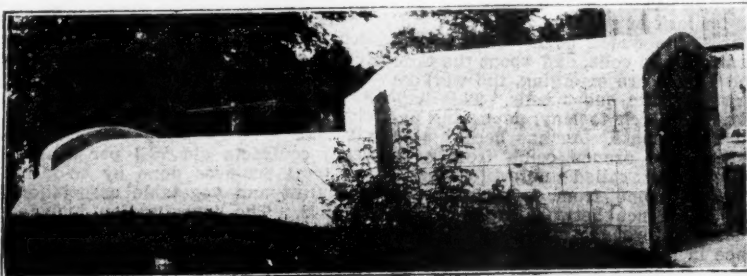
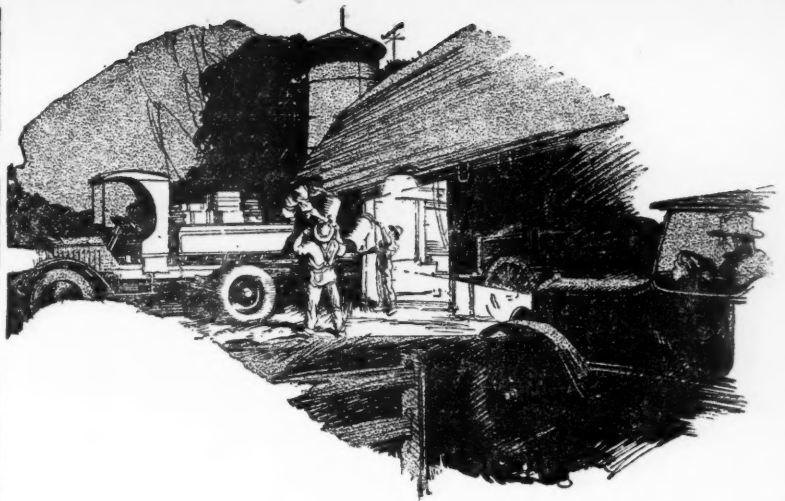


Figure 2—Farm storage cellar constructed with an arched self-supporting roof



Lamps make the automobile a 24-hour utility



The General Electric Company makes lamps for every use, from giant ocean beacons to pocket flashlights. Every one carries the G-E monogram, a mark of scientific achievement and useful public service.

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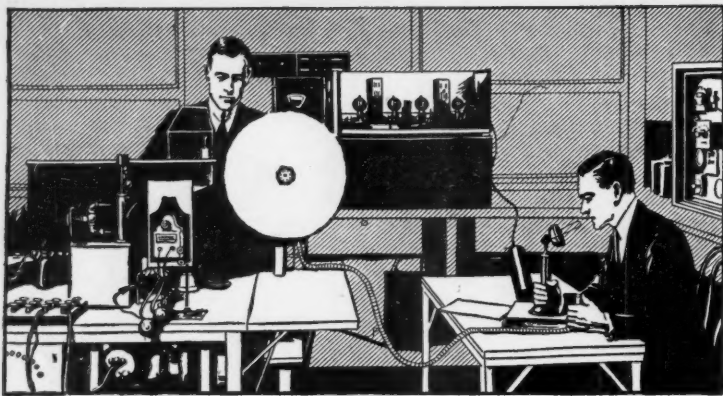
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In the Bell System laboratories speech sounds are recorded on the oscillograph with a view to their subsequent analysis.

The service of knowledge

The youthful Alexander Graham Bell, in 1875, was explaining one of his experiments to the American scientist, Joseph Henry. He expressed the belief that he did not have the necessary electrical knowledge to develop it.

"Get it," was the laconic advice.

During this search for knowledge came the discovery that was to be of such incalculable value to mankind.

The search for knowledge in whatever field it might lie has made possible America's supremacy in the art of the telephone.

Many times, in making a national telephone service a reality, this centralized search for knowledge has overcome engineering difficulties and removed scientific limitations that threatened to hamper the development of speech transmission. It is still making available for all the Bell companies inventions and improvements in every type of telephone mechanism.

This service of the parent company to its associates, as well as the advice and assistance given in operating, financial and legal matters, enables each company in the Bell System to render a telephone service infinitely cheaper and better than it could as an unrelated local unit.

This service of the parent company has saved hundreds of millions of dollars in first cost of Bell System telephone plant and tens of millions in annual operating expense—of which the public is enjoying the benefits.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

BELL SYSTEM

One Policy, One System, Universal Service

Federated Directors Meet in St. Louis

THE DIRECTORS and executive committee of the Federated Fruit & Vegetable Growers, Inc., met at St. Louis August 12 and 13, at the time of the International Apple Shippers' convention.

Reports of the officers and employees show that the tonnage for the first half of the year was up to expectations and the results generally satisfactory. Some difficult problems presented themselves in July, however, the Georgia watermelons and peaches ripening under such conditions as to make it extremely difficult to market these crops to the best advantage.

Following reports by the officers, round-table discussions were conducted on the handling of various groups of commodities as well as on some other outstanding problems before the organization. The leaders from various member associations took part in these round-table discussions.

Co-operative Accounting in Illinois

BECAUSE of the lack of standardization in accounting methods, and the high costs of auditing which have existed among Illinois co-operatives

and other agricultural organizations, an organization has recently been formed for the purpose of assisting in this direction.

Vernon Vanniman, a member of the Experiment Station staff, has been employed temporarily to form the organization, and George Wicker, of Minnesota, has been employed to head the new service.

It is expected that this organization will be able to bring about marked improvements in accounting methods of co-operatives and to effect material savings in auditing costs. Already 43 co-operatives have joined the organization.

Tax Repeal Reduces Charges

THE REPEAL of the Federal tax on telephone and telegraph charges, which became effective July 1, is making some neat savings for co-operative associations and for large growers who market their own products. The saving on telegraph charges is estimated by the California Fruit Growers' Exchange at six to seven per cent and on telephone bills about nine per cent.

The black bass is the only fish known to guard its young after hatching.

Beekeeping for the Beginner

by H. F. Wilson

TO SECURE the best possible results from each colony of bees, one should be thoroughly acquainted with the life and habits of bees. Certain general manipulations will work for all colonies, but each colony must be considered separately and manipulated according to the abnormal conditions which are likely to occur in each individual colony at almost any time.

Each type of bee—worker, queen and drone—requires a certain more or less definite time for complete development. For the worker, it is 21 days, for the queen, 16 days, and for the drone, 24 days.

Strange as it may seem, there is quite a difference between the eggs which produce drone larvae and those producing worker and queen larvae. All the eggs laid by the queen are exactly alike in appearance and size, but those which are laid in worker or queen cells by a fertile queen are said to be fertilized, while those laid in drone cells are not fertilized and always form drones.

Observation shows that a queen which has mated with a drone has the power to lay fertilized and unfertilized eggs, as the conditions within the colony may seem to require. A queen not mated with a drone can, and will, lay eggs but they are all unfertilized and develop into drones only. Now, for convenience in explaining the development of the colony, let us start in the fall and follow the life of the colony through the winter.

Life of Colony Through the Winter

In warm climates where it is possible for bees to fly and gather nectar every day in the year, the colony keeps going indefinitely, rearing brood and changing queens as they become worn out. In countries where there is a short winter period but no snow, there is a short rest period when no brood is produced. Then, as we get farther north, the bees quit brood rearing entirely for several months at a time. In the northern part of the United States, this period extends from about October or November to March or April. In the fall, when the weather becomes cold, the bees drive out the drones and kill them or let them starve. Through the winter period, only the queen and 15,000 to 25,000 worker bees are present. They remain quietly in the hive, not sleeping but clustered closely together and eating just enough honey to keep alive and to withstand the cold.

As soon as the outside temperature reaches 50 degrees Fahrenheit or more in the spring, the bees begin to take short flights from the hive to cleanse themselves and to hunt for pollen, nectar and water. Usually at about the time weather conditions are suitable for flying, the willows and early blooming trees are producing pollen, and so the bees start rearing young. The worker bees create heat by fanning and muscular movements of the body, raising the temperature up to about 90 degrees in the space where the brood is being developed.

Brood Rearing

As soon as the bees are able to fly out into the fields and gather pollen, they begin rearing brood. The queen lays only worker eggs at that time, but as soon as the colony gets crowded for lack of space and has plenty of stores, the queen begins to lay eggs in the drone cells, and about the time the drones are emerging, the workers start to build queen cells. This happens in March to May, depending upon the climate. As has been stated before, the drones come from eggs which are called unfertilized, while workers come from fertilized eggs. The difference between workers and queens is brought about by a difference in food. The table below shows the number of days required for the complete development of queens and drones.

	Egg Stage, Days.	Larval Stage, Days.	Pupal Stage, Days.	Adult, Days.
Workers	3	6	12	21
Queens	3	5½	7½	16
Drones	3	7	14	24

Notice that the egg stage for all is three days. Then for the first three days after the young larvae of the workers and queens hatch, they are fed a whitish substance, known as royal jelly. This substance is supposed to be secreted from glands in the heads of the worker bees. After the third day, the worker larvae are changed to a diet of nectar and pollen, while the queen larvae are still fed the royal jelly. It is this difference in food that causes the queens to be larger than the workers and fitted for egg laying. Also the bees may enlarge the space around a worker larva that is less than three days old and construct a queen cell around it. Then, by continuing the royal jelly as food for that larva, a queen is developed. Now then, when the queen cells are being built, it is a sign that the bees are getting ready to swarm, and unless the beekeeper takes measures to prevent this condition (usually by cutting out these cells), he will find some day that a part of the bees, with the old queen, has left.

Just about the time one or more of the queens are ready to hatch out, the old queen, with a part of the colony, will leave. In doing this, they fly out of the hive in a scramble and then, with the queen, settle on a tree nearby until the swarm is all together. After remaining there for a short time, they all leave at once and go to a new home which has previously been located by scout bees. Here they start in and build up strong for the coming winter.

In the meantime, a young queen having hatched in the parent colony, it goes about in the hive and destroys any other young queens which may have hatched, while the workers destroy the unhatched queen cells. During the summer months, a young queen is said to lay as many as 3000 eggs in each 24 hours. A few days after emerging, when she has gained her full strength, this virgin queen flies from the hive and is followed by a number of drones. One of these catches up with her and the mating takes place in mid air. Then she returns to the hive and remains within, only going out at such a time as the colony may swarm, for the queen is mated only once during her life time.

Her sole purpose in life is to lay eggs for the colony, and the workers feed her and prepare the cells in which the eggs are laid. The drones serve only to fertilize the queen and do no work, neither are they able to help in protecting the hive from invaders, for they have no stinging apparatus.

The workers do all the work; they do the housekeeping, carry out all the particles of dirt, polish up the cells and gather the food for the colony. Now, then, as you will see later, it is important that one know all of these facts in order to build up strong colonies and to keep them from swarming.

Majority Use Contracts

AN INVESTIGATION by the United States Bureau of Agricultural Economics shows that marketing contracts are used by co-operative associations whose membership aggregates 78.1 per cent of the membership of all fruit and vegetable associations. Co-operative associations using contracts did 78.3 per cent of the total business done by co-operative fruit and vegetable associations in 1922. The investigation included data from over 600 associations. The Pacific Coast section led all other sections of the country in the percentage of growers who are marketing under contract.

Growers' Contracts Make Success More Certain

by C. E. Durst

LOUIS ERB, popular apple grower, writer and speech-maker, of Cedar Gap, Mo., appears to have made quite a speech at the summer meeting of the Missouri Horticultural Society. He stated he believed it was time for the Arkansas and Missouri apple growers to organize for better marketing, and he suggested the appointment of a committee to investigate and report on the matter.

Mr. Erb's remarks in my opinion were very pertinent and timely. Certainly, the Missouri and Arkansas growers need a better marketing system. Missouri was formerly one of the leading apple states of the country, but it has fallen from that position appreciably. In all probability, the lack of efficient marketing, while other states have developed more or less efficient organizations, is largely responsible.

I feel a sense of pride in making these remarks, for I was born in the good state of Missouri and spent several of my wee years there, and I for one should like to see the old state make the best use of its great possibilities. Missouri and Arkansas are both excellently located with reference to markets, their soils are well adapted for fruit growing, and a wide variety of fruits grow to perfection in that section. It is true that scale, blotch and certain other pests are rather serious because of the southern location, but most of these can be effectively controlled by proper methods.

Mr. Erb, however, made one suggestion which I do not believe will work. He suggested that if an organization is formed, he did not believe it should have binding contracts, but that each grower should have the right to his own selling when he desired.

There are many reasons which, in my opinion, justify a marketing contract. In the first place, it is a most serious undertaking to organize and operate a co-operative successfully. It is more difficult than the building of an ordinary business. It represents the overthrow of a worn-out economic system and its replacement with a new system. The interests opposed to co-operative marketing always put up a strenuous fight when a new co-operative is formed, and an association which does not control the marketing of the products of its members leaves numerous loop-holes through which speculators can work to advantage.

Without contracts, most growers will do all their own selling they can, in order to escape the handling charge, and they will turn the products over to the association at times when they cannot handle them to advantage. Some growers will compare their own results, secured under favorable conditions, with the results of the association, secured under unfavorable conditions. A disgruntled grower would quickly spread such information without giving all the facts and it would seriously handicap the association. It is disappointing that some growers will do such things, but I know from experience that there are some of that kind in every community.

The life blood of a co-operative is products. An organization needs products in order to meet its running expenses, to keep its employees busy, and to keep its products before the trade. Even though the treasury may be full of money, a co-operative without products to handle would be a failure. The only method by which an association is assured products to handle is by means of binding contracts with its members.

Any efficient business must be planned ahead. The only way the work of a co-operative can be planned ahead is for the directors and officers to know as definitely as possible the quantity of products to be handled. Upon this depends the hiring of employees, the purchase of equipment, and the making of sales connections,

future sales, etc. Without contracts, no officers can plan the business properly.

An important factor in marketing perishables is distribution. Under individual selling, distribution is commonly a failure, for experience shows that dealers do not co-operate in such matters. In handling large crops, the shipments must be distributed with respect to time and place, for the best results. Two thousand cars of California oranges glutted the market several years ago under dealer distribution, but now, through an efficient exchange which controls the marketing, 50,000 cars of oranges are distributed annually without glutting the markets. Wise distribution can be accomplished only through an association which controls a large enough proportion of the products to be the chief factor in the market and which has definite control of the marketing of the products.

Suppose a co-operative were formed in Missouri and Arkansas and it had a good offer for 50 cars of Ozark Winesaps, or suppose an export firm wanted 10 cars per week at 25 cents per barrel above the prevailing market price during January and February. How could the directors and manager take advantage of such an offer unless the association controlled the marketing? It is impracticable for an association to go out to its members and secure confirmation for such sales. Sales of perishables are made too rapidly to permit of such practices.

Why fear a contract? After all, if an association is grower-owned and grower-controlled, the products are simply instruments between the growers themselves, each thereby signifying to the others that he will stand by them and see the proposition through. Personally, I should have far more confidence in an association which required binding contracts than in one which did not. Binding contracts would make me feel that the association had a fair chance of success.

In the early days of co-operation, it was rather common to form associations without contracts. In the enthusiasm of the moment, every grower felt he would do his part, but with the advance of time and the work of speculators, many became weak-kneed and failed to deliver their products. Such methods have ruined hundreds of associations, and those which have passed through such experiences have required contracts in their reorganization campaigns.

It is true that a few associations are succeeding without contracts, but usually there is some feature about the operation of such associations which tends to bind the members, and again, such associations are often thoroughly established in the confidence of growers.

It seems to me that the Missouri and Arkansas growers should look into this matter very carefully. Their committee should study the organization plans of as many fruit co-operatives as possible. It would be a good plan for the committee, as well as other growers of that section, to visit as many associations as possible in other states. If you form an organization, you will want it to enjoy the greatest success possible right from the start, and the better your plan is, the better chance your association will have to succeed. The other co-operatives have had a rich experience which you can greatly profit from. Why not take full advantage of this experience rather than try to learn everything by hard and expensive experience?

The Aim of Co-operative Marketing

AMERICAN farmers, considered as a class, are not prosperous and their net income, calculated over any reasonable period of years, does not represent a satisfactory return upon

their investment of capital and labor. There was a time in American history when the wealth and power and culture of the nation was greatest among its farm population. In this day, an undue share of these blessings is enjoyed by the population of our cities and towns. During that period when our commerce and industry have made their most notable advances, agriculture as a national industry has declined, both in dignity and profit.

Our farmers realize these things and are beginning to understand their causes. They have observed how other industries have availed themselves of the economies and efficiencies of group action, as in the case of corporations, labor unions and the multitude of commercial and industrial groups. The farmer alone has tried to maintain himself as an isolated, individual unit. The co-operative marketing movement is merely an effort on his part to avail himself of the efficiencies and economies of group action in the sale and distribution of his products. Through his co-operative associations, he is endeavoring to put an end to the old, wasteful and expensive system of individual dumping and blind selling of his products and substitute the orderly merchandising of them according to the sound rules of modern business. He is fighting nobody but is merely giving intelligent attention to the very important selling department of his own business. He has already made sufficient progress in the development of forms and methods to convince himself, and a considerable portion of the business public, that he is on the right road. His experience with co-operative selling, considered as a whole, shows a substantial profit to himself without injury to any other legitimate interest. He invites the general public to study his efforts and to co-operate with him in rehabilitating and stabilizing agriculture upon a profitable basis, which will bring blessings to all the people. —Walton Pectet, Sec'y, Nat. Council Co-op. Mkt. Ass'n.

National Conference on Fruit Marketing

IN ORDER to advance further the wide distribution of fruits and to relieve market congestions with their high annual losses to both consumers and producers, the American Pomological Society has called a National Conference on fruit marketing, to be held in connection with its annual meeting, at Atlantic City, next November, according to an announcement by Paul Stark, president of the national organization. This Society was established in 1848 and is the national association of fruit growers and horticultural authorities.

The different states and the various leading fruit sections are to be invited to send representatives to discuss and formulate plans which will have for their purpose an even and continuous distribution of fresh fruit during the entire year throughout America. With an even distribution, good, fresh fruit will be available at all times and will also tend to prevent the big market gluts. The stabilizing of distribution will result in a steadier condition on the markets, with a constant supply. Prices will be fair to both consumers and producers, which will bring about an increased consumption of fruits throughout the year.

Production and Prices of Apples

IT IS the general impression that the production of apples has increased enormously in the United States during the last 20 or 30 years. It is true that there have been very large plantings of young trees, but this has been offset by the dying off of old trees. While our total production of apples increased from 135,000,000 bushels in 1890 to 189,000,000 bushels in 1920, if this increase is compared with the increase in popula-

tion, it will be found that the production of apples per capita of our total population has decreased steadily from 2.17 bushels in 1890 to 1.79 bushels in 1920.

It is rather surprising in the face of this decreased production of apples per capita to find that the average price of apples has declined during the last two decades. According to Prof. Scoville of the New York State College of Agriculture, for the 15-year period from 1889 to 1906, the average price of Baldwins was \$3.65 per barrel. For the 15-year period from 1907 to 1923, the average price of Baldwins was \$3.12, or a decrease of 53 cents per barrel in the second year period from the first. In the same way, the 15-year period price of 16 leading varieties of apples, weighed according to the amount shipped, was \$3.45 in the first 15-year period and \$2.95 in the second 15-year period, a decrease of 50 cents per barrel.

In other words, there has been a decrease in the price of apples of from two to six cents per barrel per year for the last 15 years.—Extract from radio address by M. C. Burritt.

Co-Operatives Should Incorporate

IN MANY localities, co-operative associations, particularly locals, are organized without being incorporated. Members of these associations will be interested in a court decision recently rendered in California. The court held as follows:

"While as between the members of an unincorporated association, each is bound to pay only his numerical proportion of the indebtedness of the concern, yet as against the creditors, each member is individually liable for the entire debt, provided, of course, the debt is of such nature and has been so contracted as to be binding on the association as a whole. . . . An unincorporated association organized for business or profit is in legal effect a mere partnership so far as the liability of its members to third persons is concerned; and accordingly each member is individually liable as a partner for a debt contracted by the association."

The decision in this case clearly illustrates a principal which is almost universally established in our court procedure, namely, that an unincorporated association is nothing more nor less than a partnership and that individual members are personally responsible for the debts of the association. It costs very little to incorporate, and it is not a difficult matter. Every co-operative should be incorporated.

Georgia Results With P. D. B.

JUST as this issue is going to press, we are in receipt of a letter from Prof. Oliver I. Snapp, associate entomologist of the United States Department of Agriculture, stating that his results in the use of paradichlorobenzene in Georgia are at variance with those reported by Dr. Flint, and Dr. Ruth in the August issue of the AMERICAN FRUIT GROWER MAGAZINE. Prof. Snapp states that P. D. B. caused injury to young peach trees in Georgia, and he therefore does not think it advisable in the South to use the material on peach trees less than three years old. We have asked Prof. Snapp to prepare an article on this subject for our October issue.

New Circular on Marketing and Loading Grapes

"HANDLING and Loading Grapes" is the title of Circular 171, just published by the University of Arkansas, Fayetteville, Ark. Pictures and charts are used to illustrate the most approved methods of picking, grading, packing and loading grapes. The Michigan grape grades are quoted in full. Types of containers best adapted for packing grapes are also described.

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TREES AND PLANTS

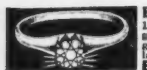
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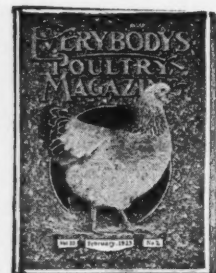


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Storing Fruits and Vegetables for Family Use

(Continued from page 25)

built outside storage cellar. The writer has eaten apples taken from such a cellar on the Fourth of July that were in perfect condition.

For best results, the outside cellar is built practically underground. It is much more convenient to enter and is easily constructed when built on a side slope, and such a location also makes possible ideal drainage.

Special attention should be given to the ventilators and air intakes. They should be provided with dampers so they may be opened and closed to maintain the correct temperature in the cellar. The air intakes should be opened only during cool evenings and the ventilator damper should be opened at the same time to remove the warm air and cool the cellar. The fresh air intake should be constructed so as to take in the air at the floor line. By providing an open water tank, over which the air must pass, the proper humidity can be maintained. Better circulation of air can be secured by making a false floor of two by four joists, covered with one by four boards, spaced one inch apart. Similar side wall construction is desirable.

An outdoor storage cellar should be of masonry construction. Brick, hollow tile and concrete are preferable. Stone is used in many localities where it can be easily obtained. If care is not observed in building of stone, drainage water is liable to seep in through the side walls. Local conditions will often be the determining factor as to the materials to use. Where a good quality sand and gravel can be secured locally, for little more than the cost of hauling, a concrete cellar can be built at little expense. In other localities where all materials must be shipped in, it might be more economical to use either brick or clay block.

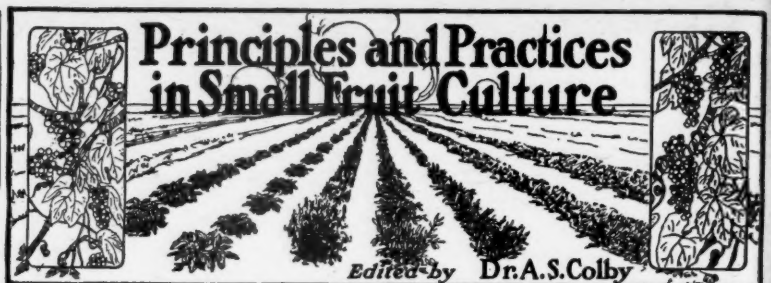
Figure 1 shows the cross-section of a cellar made of concrete. This view illustrates the ventilator and air intake very clearly. As will be noted, the roof on this cellar is made flat. Such a roof would have to be reinforced, the amount needed depending on the width of cellar and the number of supports. In constructing such a cellar, special attention would have to be given to all form work so the walls would be true, smooth and properly aligned.

Figure 2 is a photograph of a farm storage cellar constructed with an arched self-supporting roof. This particular cellar is ventilated by a small opening at the back end not shown in the picture. Many small arched cellars are made of brick and are quite satisfactory. A complete blue print plan of a concrete cellar of this type may be secured from the farm mechanics department of the University of Illinois, Urbana, Ill., at a cost of 20 cents.

Figure 2 illustrates an excellent feature in cellar construction in that it is built with a vestibule entrance. The vestibule should be sufficiently large so that the person entering can close the outer door before opening the inner door, thereby preventing the entrance of draughts of cold air in extreme winter weather, or warm air at other times of the year. To be most effective, the vestibule walls should be thoroughly banked with earth, and ordinarily it is considered best practice to cover both the sides and top of the cellar with two or three feet of earth.

I wish to take this opportunity to praise your fine magazine, and I must confess that, thanks to the good advice given in it, I have made my orchard a success.—John Halbarck, Argentine Republic.

I like your paper so much that I am enclosing my check for \$1 for your paper for the next three years.—R. L. Wood, California.



How Grape Storage May Extend the Marketing Period

IT IS generally understood that the native American grape varieties are relatively perishable fruit. Comparatively little has been done to determine whether this delicious fruit, when eaten out of hand, could be satisfactorily stored for three or four months. The benefits to be derived from such a proceeding would be twofold. It would relieve the glut often occurring in the early fall, and distribute the sales of fresh native grapes through a period of several months. It would mean better prices both at the beginning of the season and again in early winter, after the bulk of the California grapes had been marketed.

There is no question as to the usefulness of the grape as an article of daily diet. In one or the other of its many available forms, either in salads, as a filling in grape pie or used for jellies and juice, the grape is indispensable as both a healthful and delicious fruit. Anything, therefore, which can be done to extend the season of the fresh fruit is well worth while from every standpoint.

Storage Experiments with Grapes

A beginning was made several years ago at the Geneva, New York, Experiment Station in testing the keeping qualities of native grapes in common storage. Bunches of different varieties were placed on the second floor of a frame building and notes taken from time to time on the keeping quality of the grapes. It was found that certain varieties could be kept in fair to good condition for from six to 30 weeks, depending on the variety.

At the Illinois Agricultural Experiment Station we have been carrying on cold storage experiments with grapes for four years. Our picking season extends from about August 4 to October 10. By bagging the individual bunches in summer, the season can be extended for those grapes so protected for over a month longer at least.

How Bagging is Done

Just a word in explanation of the way bagging is done. Ordinary grocers' manilla bags or sacks, either two or four-pound size, depending upon the size of the individual bunch of grapes, are pulled up over the bunches to be bagged. They are then secured at the top of the bunch by tying or fastening around the supporting shoot. One should not bag grapes showing disease or insect injury, and grapes which are bagged should be examined occasionally to see that they are keeping well.

Red Varieties Keep Better in Cold Storage than Black or White

At the Illinois Station the grape varieties are brought into the cold storage room as soon as possible after being picked and kept continually at a temperature of 31 to 33 degrees Fahrenheit. We have found that as a rule red varieties keep better, all things considered, than the blacks or whites. For example, the Brighton keeps in fine condition until after Christmas, while the Agawam, Catawba, Caco and Vergennes keep well into late January. The varieties just mentioned are all classed as red. Black varieties, such as Wilder and Bacchus, stand up well into January.

Grapes Must Be Given Best of Care from Start to Finish

Grapes cannot, however, be put in cold storage in a haphazard manner or be roughly treated at any stage and be expected to come through. A grower who believes that the cold storage of grapes has possibilities must decide to give his grapes the best of care from start to finish.

Some of the steps are: (1) Plant varieties which will grow well in your section, which have been shown to be good market varieties and which will also keep in storage. (2) Carry out the most improved methods of culture, including fertilizing, cultivating, spraying, pruning and training. (3) The grapes should be picked at just the right stage, if anything just a trifle underripe. Grapes do not ripen to any extent after being picked so they should be carefully watched for the indications of maturity. These include slight shrivelling of the stem, a characteristic color of the fruit, and a flavor and aroma easily learned by tasting the fruit. (4) Only the best and most shapely bunches should be selected for storage. Discard any bunches with missing berries or evidence of disease or insect injury. (5) The fruit should be handled very carefully on spring wagons or light trucks and gotten to storage just as quickly as possible. It should be handled just as little as feasible throughout its season, as handling injures the "bloom" and thus destroys the protective covering of the berry.

With grapes thus cared for a market at good prices is assured late in the season. It must be remembered, however, that quality varieties need quality care and that only quality grapes should be put into storage if quality fruit is expected as a result of holding fruit in this manner.

Oregon Prune Growers Organize

by W. A. Scott

THE NORTH Pacific Co-operative Prune Growers' Exchange was organized July 29 at Portland, Ore., by representatives of nine local grower organizations in that state, whose production this year is estimated at 12,000,000 pounds of prunes. Other local units are expected to sign up with the exchange, including the one of a large membership in Clark county, Wash.

W. L. Taylor, of Scotts Mills, was elected president. M. J. Newhouse, formerly with the old Oregon Growers' Co-operative Ass'n, was chosen manager of the exchange. Directors were elected as follows: Henry Voth, Polk county; Kenneth Miller, Yamhill; M. R. Adams, Marion; L. N. Miller and M. H. Harlow, Lane county; Dr. E. P. Dixon, Dundee; W. L. Taylor, Scotts Mills; Victor Rees, Springbrook, and John F. Forbes, Washington county.

This exchange, as a marketing organization, probably will take over the selling organization of the former Oregon Growers' Co-operative Ass'n, and will maintain offices in Portland.

There are 251,176 miles of steam railroads in the United States. The railroads are owned by 777,132 stockholders. The par value of this stock is \$7,242,191,000.

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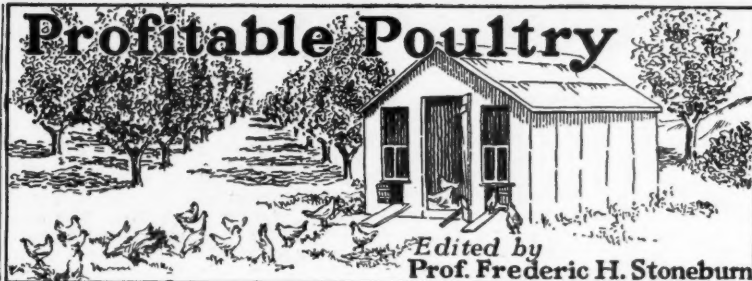
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MR. C. E. BROOKS

Profitable Poultry



Edited by
Prof. Frederic H. Stoneburn

Overhaul the Poultry Plant

IN ALL branches of agriculture, the greatest success is achieved by those who anticipate the duties of each season and keep ahead of their work. The wise farmer has everything in readiness at the proper time so no time will be lost. He knows that it is easier to keep ahead than to catch up; he knows how much he loses if, for instance, he fails to spray at the proper time. And this is equally true of the seasonable poultry work.

Right now the spring pullets, the prospective winter money-makers, are growing at a rapid rate. Within a few weeks, they will begin to show signs of approaching maturity. Almost before we realize it, they will be large in size, with abdomens well developed and combs beginning to shoot. Then an occasional egg will be found on the range. This is the signal to put the birds into winter quarters and get them settled down for a season of hard work. If they are left out on the range until they begin to lay and are then moved, production will be checked and may not be resumed until much valuable time has been lost. As the fall eggs bring good money, the object should be to get the majority of the pullets laying by mid-October, certainly by the first of November, and keep them steadily at it all winter. And that is a question of management.

Once the flock of winter layers is selected and moved to permanent quarters, it should not be disturbed. This means that the houses and adjoining yards should be put in perfect condition before moving day. Full advantage should be taken of the dry, pleasant weather and the work completed before the rainy weather of fall arrives. If the bad weather sets in, these necessary duties may be neglected, or the work done under difficulties, or the flock, forced into the houses by the approaching winter, will be continually upset.

First, make a careful survey of the entire plant and check up everything that needs doing. Make a list of the supplies which will be required—fence posts, fencing, glass, roofing paper, paint, hinges, disinfectant, etc.—and order them so they may be on hand when needed.

Outdoor Work Must Be Done First

Attend to the outdoor work first. Put under cover a supply of dry, mellow earth to last until the dry season arrives next year. This material will be needed to freshen up earth floors, to provide dust baths, to sprinkle under roosts, and for use under the brooders next spring. Cultivate the yards and seed them down with some suitable crop, according to locality. Rye and winter wheat are favorites. Deep and thorough cultivation will aid in killing off any troublesome germs present in the soil and the growing green crop will remove the accumulated droppings from the soil and supply green feed throughout the fall and early spring. Make the yards hen-proof. Straighten up the posts and set them firmly. Tighten up the netting and repair any holes therein. Fix up the gates. Pay especial attention to the yards to be occupied by breeding flocks which must be kept separate. Arrange for a liberal supply of litter and provide a dry place where this may be stored. Arrange also for the required winter green food. If this must be purchased, a great saving can be made by having material drawn direct from the field.

Prices are higher after the crops are gathered and stored for the winter. Cabbages and cattle beets are favorite feeds. Open up the drainage system around the buildings so all surface water will be carried off. When water collects in low spots near the buildings, it will usually seep underneath them and make them damp. That means sickness in the flock. Broad, open ditches, discharging at a distance from the buildings, will overcome this.

Exterior and Interior of Buildings Must Be Put in Order

Then put the buildings in order. Carefully repair any leaky roofs. Give the roofing fabric a good coat of roof paint or hot tar. Sprinkle on a coating of coarse sand, while the paint or tar is still soft, as this will protect the surface and improve wearing qualities. Patch up all holes or cracks in the walls. Keep out the drafts which may cause colds. See that doors fit snugly and that hinges and latches work properly. Replace broken glass in the windows and see that the sash move easily. Wash the windows so they will admit plenty of light. Replace broken netting over windows and ventilating openings. Repair or renew the cloth on the frames.

And do a mighty thorough job of housecleaning. Remove all the portable fittings—roosts, dropping boards, nests, feed hoppers, etc.—and scrape and disinfect them. Leave them out in the sun. Get rid of the dirt and germs. If earth floors are used, remove the earth to a depth of several inches. Brush the accumulated dust off the beams, sweep down the side walls. Put in fresh earth to replace that which was removed, filling in to a point well above the ground level.

Then disinfect the whole interior. Use a spray pump and reach every exposed surface. The disinfectant costs but little, so do a good job while you are at it. Kill every germ that may be lurking in the building.

After the walls are dry, give them a coat of whitewash or white water paint. This does two things: It makes life unpleasant for vermin and makes the pens lighter and more cheerful. Both have their influence on comfort and egg production.

Repair and replace the furnishings. Put in a supply of litter and nesting material, and the buildings will be ready to receive their winter guests at any time. After the birds are moved in, they need not be disturbed in any way and can settle down to work without costly interruptions. All this work is necessary—it can be done during the next few weeks to better advantage than later.

Michigan Adopts Federal Grades for Pears

MICHIGAN pears will be packed and shipped under the Federal grades this season, as a result of the promulgation of these standards as the legal grades for that state, by the Commissioner of Agriculture, Lansing. The new grades, which became effective July 14, were promulgated at the request of pear growers in southwestern Michigan, who want the same protection against the careless packer as now enjoyed by apple, peach and grape growers.

How to judge tobacco

The true test lies inside the pipe—not in the pedigree, says Mr. Krob

In the following letter Mr. Krob points out that once we are past the infantile stage of "taking the watch apart to see what makes it run," we learn that true happiness is a matter of appreciation rather than of analysis. How do you feel about it?

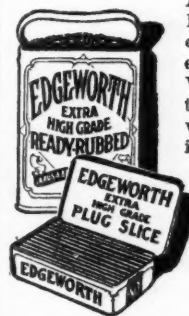
Lorus & Brother Company,
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Gentlemen:

Most people who are buying Better Light look up at the fixtures we install and say, "That's wonderful," when they should not even be interested in the fixtures. They should look down at their desk-top or counter or work-bench, where they actually use the light. They always want to consider it "F.O.B." the lighting fixture, instead of "Delivered" to the working plane, where it is to be utilized.

Personally, that's the way I look at tobacco. Many manufacturers go into detail telling us where their product is raised, how it is blended, how long it is aged and how well it is packed, and place this information before the public in their advertisements.

Why should we care whether tobacco is raised in the Sahara or on an iceberg, whether it is a blend of "57 Varieties" or run-of-the-mine, or whether it comes packed in cork or cast-iron containers? I buy my tobacco because of the way it tastes in the pipe. That's why I use Edgeworth.

Sincerely yours,
K. M. Krob.



As the producers of Edgeworth we are of course vitally interested in its pedigree. We are absorbed in the blend of Edgeworth and in its curing—in every detail of its development.

But all our work and experiment and study has but one object—that Edgeworth may prove its worth "Delivered—Pipe."

And that's all we expect you to be interested in.

A great many men like Edgeworth and have written to tell us so, but it doesn't necessarily follow that all men will like it. Perhaps you will find something in Edgeworth to dislike—we'd be glad to know about it.

Let us send you free samples of Edgeworth so that you may put it to the one and only test that counts. If you like it, so much the better for us both. If you don't—well, that's that!

Write your name and address to Lorus & Brother Company, 83 South 21st Street, Richmond, Va.

Edgeworth is sold in various sizes to suit the needs and means of all purchasers. Both Edgeworth Plug Slice and Ready-Rubbed are packed in small, pocket-size packages, in handsome humidor holding a pound, and also in several handy in-between sizes.

We'll be grateful for the name and address of your tobacco dealer, too, if you care to add them.

To Retail Tobacco Merchants: If your jobber cannot supply you with Edgeworth, Lorus & Brother Company will gladly send you prepaid by parcel post a one- or two-dozen carton of any size of Edgeworth Plug Slice or Ready-Rubbed for the same price you would pay the jobber.

Why Cull the Farm Flock?

by H. A. Bittenbender

WHY IS it that some farm poultry flocks yield an excellent income every month in the year, while other flocks are kept at a loss more than half of the year? It is true that there are very few farm poultry flocks that are kept the entire year at a loss. The reason for the fact that practically every farm flock is profitable to some extent is due to the fact that on most farms the majority of the chicken's living is picked up from the first of March until the last of October.

To secure the maximum profit from farm poultry means that it is necessary for the owner to provide a satisfactory shelter 12 months in the year, to feed some at all times, to carefully select out the unprofitable hens in the flock, and to separate out a breeding pen and from this pen hatch the necessary chicks to renew the flock, to hatch early enough to have the pullets mature before cold weather sets in, and to grow the pullets rapidly throughout the summer and fall months in order that they will not be stunted.

The writer is going to confine this discussion to the types of birds that should be eliminated from the laying flock because they do not produce a sufficient number of eggs to be profitable.

Poor producing birds may be eliminated at practically any month in the year. There are some months in which culling may be done more easily than in others. For the inexperienced person, and for those who wish to eliminate the largest number of birds possible at one time, July, August and September afford the best months. Those hens that have laid the largest number of eggs from the day that they started laying up until the first of July will also lay the larger number of eggs from July on. The hens that started laying, say March first, while other hens under the same conditions of feeding and management started laying earlier and laid throughout the winter months, have every chance to continue their laying period throughout the late summer and early fall.

One of the first steps in culling is to be able to distinguish between hens that are laying and hens that are not laying. The following characteristics will serve as a good guide to follow:

The hen in laying condition will show a comb bright red in color, well filled with blood and warm to the touch. The beak in yellow skinned varieties will show a fading or loss of yellow color if the hen has been laying continuously for a period of time. In the white ear lobe variety, the ear lobe will be bleached out free from yellow tint, provided the hen has been laying continuously. The pelvic or lay bones will be well spread, while the vent will be free from yellow color, moist and dilated. The abdomen will be pliable, soft and capacious. The shanks in the yellow skinned varieties will show evidence of fading during the latter period of a heavy, continuous laying period. These characteristics indicate a hen in laying condition.

A hen not in laying condition at the time that she is being handled will show a comb small in size, dull in color, rather shriveled or shrunken, and lacking in warmth. The yellow color may be seen at the base of the beak, with perhaps a tinge of the yellow pigment coming back into the ear lobes. The pelvic bones will be hard, close together and lacking in space between. The vent will become dry, coated with yellow scale or pigment and shriveled in size. The abdomen becomes hard and firm, and the distance between the end of the breast bone and pelvic arches closes up.

The reason for being able to distinguish a hen that is laying and one that is not laying is due to the fact that body changes take place when a hen is not laying. We might eliminate a good producing bird from the flock because she showed narrow between the pelvic bones and lacking in

capacity, this condition coming about because she had quit laying, due to broodiness or some other cause, when soon she might come back into laying and really would be a profitable bird.

The following score card has been arranged to show the percentage of importance to be placed on the different characteristics. The percentage is based on a 100 per cent bird being a 300 egg producer. Under farm conditions, a hen that lays 60 eggs or more can be considered a profitable bird, or, according to the score card, she would only need to score 20 points, which is one-fifth the value of a perfect bird. We ordinarily figure an individual that falls below a score of 85 per cent as being a poor individual, while from the standpoint of production we figure a hen which scores, according to this score card, at 60 per cent, as being a very good bird. A flock of 200 egg birds is the exception rather than the rule.

SCORE CARD.

	Per- Egg-Pro-	
	duction.	Points. Value.
Body Type (as seen in coop or on floor)	25	75
Head and Adjuncts	15	45
Body Conformation (as determined by handling)	30	90
Handling Quality	10	30
Legs and Toes	5	15
Condition	15	45
Total perfection score	100	300

Body Type (Perfect Score—25 Points, 75 Eggs)—A bird of good body type should be well balanced. The body itself must be deep in breast, well developed and the type nearly rectangular in form. Great depth of body is especially desirable. One must be careful, however, that such depth of breast and body is actual and not due to feathers. On the other hand, depth of body should not be due to heavy deposit of fat in the abdomen and a breaking down at the end of the keel bone. The underline should be fairly straight and the back nearly horizontal. The hen of small capacity is inclined to stand erect, with the lines of the breast and the body coming at sharp angles to the point near the hocks.

Head and Adjuncts (Perfect Score—15 Points, 45 Eggs)—Refinement and femininity are the two most important characteristics to determine in the head. A leanness about the head, with plenty of vigor, vitality and constitution, together with a bright, clear, prominent eye, is indicative of high egg production and ability to lay, while the long, slender, more flat heads, with dull eyes, are indicative of low egg producers. Meatiness about the head is indicative of low producers, while the bird with an overhanging eyebrow and thick heavy eyelids, can usually be considered as only medium to a poor producer.

Body Conformation (Perfect Score—30 Points, 90 Eggs)—Capacity must be had if high egg production is to be obtained, capacity for developing eggs, digesting food and maintaining thrift and vigor. Any conformation that tends to restrict capacity must in some measure affect the number of eggs that can be produced. Capacity must be measured relatively in proportion to the size of the bird. Breed type affects, to a marked extent, the means of obtaining this capacity. For example, a Wyandotte with one spherical shaped conformation gets its capacity in the short, broad back, with deep full breast and body, while the Rhode Island Red gets its capacity by being rectangular in shape, with a longer back and less width. It is necessary, however, to watch the short back so that it has plenty of width and length. The long back is very apt to taper, both towards the front and rear, and may be inclined to be narrow throughout. Thus a bird with a long back may have less relative capacity than a bird with a short back. The position of the keel bone is of great

importance. The straight keel will nearly always give more capacity than a long keel that is not parallel to the back, or of rocker type.

Handling Quality (Perfect Score—10 Points, 30 Eggs)—The skin of a heavy producing hen is thin, soft and pliable. Especially must the skin on the abdomen be thin and loose. The skin of the poor producer is generally thick, hard and rather coarse to the touch. The thin, velvety skin is almost always associated with heavy ovarian activity.

Legs and Toes (Perfect Score—5 Points, 15 Eggs)—The shanks of a heavy producer are flat, pliable and smooth scaled. In hens at the end of their laying year, or pullets which have been laying heavily for some time, the shanks will be bleached out. The toes should be straight and the toenails should show indication of proper activity. The shanks of the poor producer are usually round, hard and rather coarse scaled.

Condition (Perfect Score—15 Points, 45 Eggs)—A bird, to be capable of highest sustained production, must be first of all healthy. She must show vigor and activity and be well fleshed. Late molting in hens is desirable. Early molting and slow maturing, as shown by the primary feathers, should be cut severely. Late developing and late maturing usually indicate low production. In applying this section to pullets, health and maturity should be given primary consideration.

Diseased Birds

Birds of low vitality are more apt to contract sickness and diseases. These birds should be culled from the flock whenever they are noticed. It does not pay to try to treat individual sick birds. If disease has attacked the whole flock, find out the cause and give the flock treatment. The individual birds, unless they are valuable breeders, can thus be best disposed of, and this eliminates spreading of disease to the rest of the flock. When birds become pale around the head, stand around inactive, develop excess bowel trouble, lose weight and are not laying, this indicates that something is wrong. It may be some infectious disease due to some internal physical condition. Tuberculosis can be more quickly eradicated by thorough sanitation and constant elimination. These birds are unfit for food and should be killed and not marketed.

Profits to Be Obtained from Culling

Last year thousands of hens were eliminated from the farm flocks. The data that the Iowa State College has available shows that the average size of the farm flock is about 150 birds. Thirty-six per cent of these birds are culled and are being kept at a loss. This means that in every flock of 150, there are at least 45 unprofitable birds. If the owner will take the time to eliminate these 45 cull birds, it will mean a saving of a large amount of feed, but the most important consideration is that the remaining hens will lay more eggs than if the cull birds are left in the flock. In the records that are kept, the percentage of egg production was increased during the summer months from 15 to 30 per cent more after the flocks were culled.

The placing of the culled birds on the market during the early summer months will mean less loss of heavy hens during the hot weather. It will also tend to eliminate disease getting in the flock and insure more egg production and a far more profitable return from the flock.

Local Fruit Marketing in Indiana

by Arthur M. Davis

SOME 10 years ago I had a young orchard of some 300 trees come into bearing. Like most men new to the business, I thought, of course, I would have to barrel my apples, put them into storage, and sell them through a

commission man. So I bought two carloads of barrels, began picking my crop and packing it. One day an auto stopped at the orchard, and the driver asked if I would sell him some apples, and I told him to help himself to whatever variety and grade he desired. This man bought several bushels. I gave the sale no thought until a few days afterward other people came and told me of their neighbor having bought apples, and asked me to sell them some. This was the beginning of my orchard sales. By the time my crop was picked, I had one car of barrels in storage, one car of empty barrels on hand, my apples all gone, and I had picked nearly three carloads. The next year I did not buy barrels and have not bought any since, though my bearing orchards have increased to several times the size of the first orchard. New orchards are coming into bearing each year, but not fast enough to keep pace with my increasing trade. Five years ago I began planting peach fillers in my young apple orchard, and as they began coming into bearing, the trade increased enormously. Not one year since my first crop was picked have I had fruit enough to supply the demand.

I have not done any advertising other than a small card in the local papers announcing the time the orchard would be open and about the date the various varieties would be ready, a 10-foot sign on the main highway, one mile from the orchard, giving directions to the orchard, and a similar sign at the orchard.

In dealing with the public, one has to study people and learn how to handle them. Some people are easily satisfied and will take anything offered them; others know exactly what they want, and others must be shown. Nearly every one likes to visit awhile, ask questions and be shown around the orchards, especially on their first visit. Plenty of good, ripe, fancy fruit is always on hand and people are told to eat all they can while at the orchard. Customers are invited to bring the children and lunch baskets and picnic as long as they like. Cider mills and apples are furnished without charge for their picnic cider.

My men are instructed to always put the best and largest fruit in the bottom of the basket, so that when it is turned into the customer's container he always gets a little better grade than he buys, and the baskets are heaped as high as the fruit will stay on. The customer is never urged to buy what he does not want, but the quality and use of each variety is explained to him, and all varieties are sold under their true name.

Prices are established at the beginning of the season, and these prices are not raised or lowered unless there is a violent fluctuation in the market. The price is the same to every one, and is based on the wholesale market of my nearest large city, less freight and commission. The customers furnish their own containers, but if they have none, baskets are sold at cost or less, the purchase price to be refunded on return of the basket. All sales are strictly cash, whether the customer is an individual or a dealer, and the dealer or truck trade is growing rapidly. They come for 100 miles or more, especially for peaches.

By following the roughly outlined plan, any one properly situated can easily get a market for his fruit. But he must have good clean fruit to begin with, the proper varieties, give extra good measure, make every one feel it is a pleasure to you to have him come, whether he comes to buy or visit, for the visitor will eventually become a buyer, treat everyone alike, and your marketing problem will soon be solved.

Hoosier Horticulture.

Bulletin on Blueberry Culture

A BULLETIN on blueberry culture has recently been issued by Joseph J. White, Inc., Whitesbog, N. J. It is our understanding that a copy of the bulletin can be secured on application.